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ABSTRACT

Presenting a wide array of Internet addresses and sample lessons, this book shows how teachers can integrate the Internet into their K-12 curriculum to actively involve students. The first section of the book (chapters 1-6) deals with the programs needed to use the Internet, as well as 100 great web sites for teachers, how to manage the Internet classroom, and how to search the Internet effectively and easily. The second section (chapters 7-16) contains lessons with clearly stated goals, rationales, objectives, procedures, and evaluation guidelines. New to the third edition are reproducible Black Line Masters and Evaluation Rubrics that consider each aspect of the activity. After a matrix of contents and an introduction to the basics, chapters in the book are: (1) "The World Wide Web"; (2) "A Wealth of Web Sites"; (3) "Using the Internet for Teaching--Rules for the Road"; (4) "Searching on the Web--Directories and Search Engines"; (5) "Developing and Designing a Web Site"; (6) "The Past, Present, and Future of the Web"; (7) "E-pals and Keypals"; (8) "A Whale of a Time!"; (9) "The CyberNews"; (10) "The ABCs of Canada"; (11) "Virtually Together in D.C."; (12) "Get a Job!"; (13) "A Book an Hour"; (14) "The Ambassador to Mexico WebQuest"; (15) "The Games People Play"; and (16) "Just for the Little Kids." Contains a 28-item list of selected Internet books and a 37-item abridged glossary of Internet terms. (RS)

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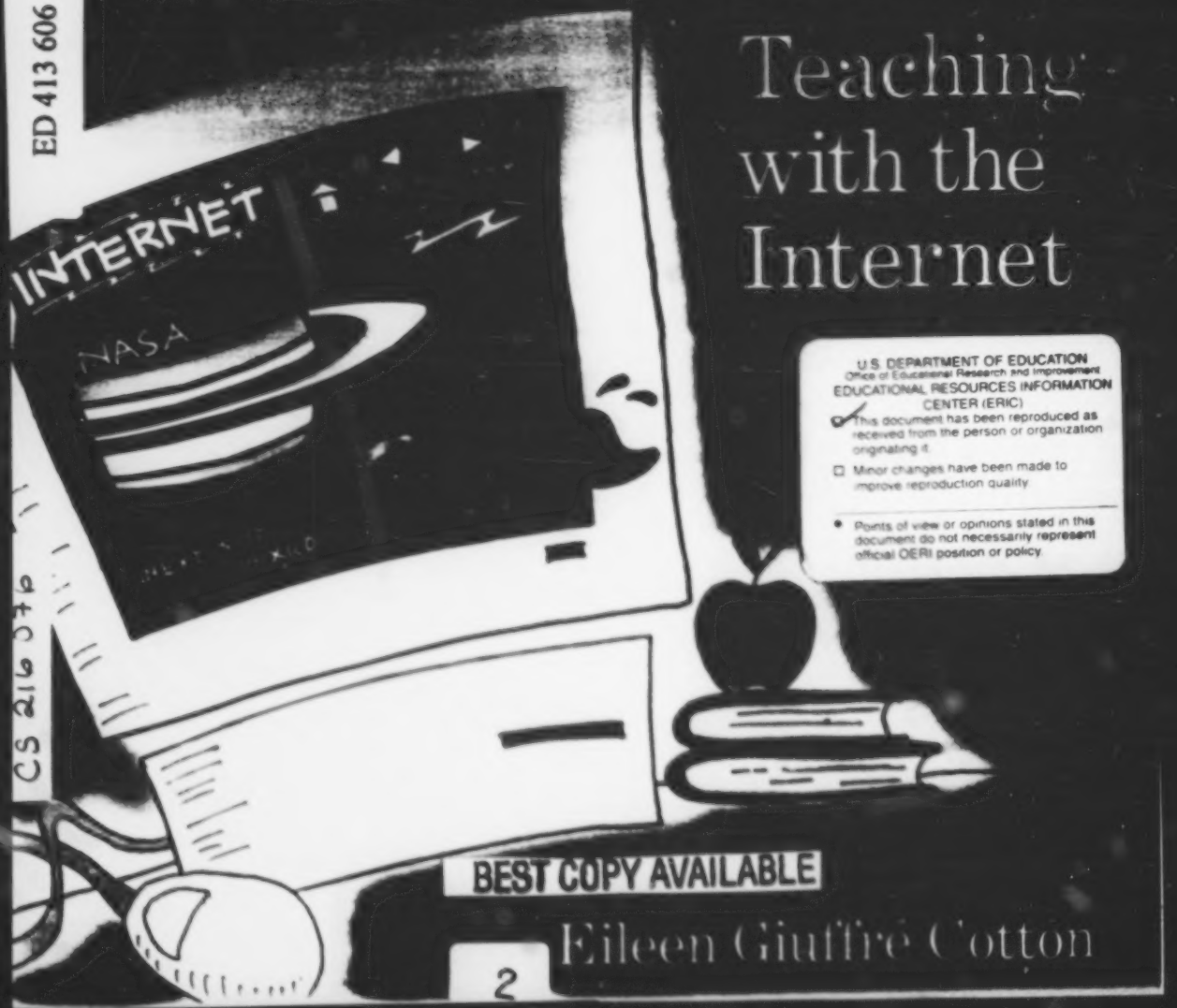
The Online Classroom

3rd Edition

Teaching with the Internet



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Eileen Giuffre Cotton

The Online Classroom

Teaching with the Internet

Third Edition

by Eileen Giuffré Cotton

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ERIC (an acronymn for Educational Resources Information Center) is a national network of sixteen clearinghouses, each of which is responsible for building the ERIC database by identifying and abstracting educational resources, including research reports, curriculum guides, conference papers, journal articles, and government reports. The Clearinghouse on Reading, English, and Communication (ERIC/REC) collects educational information specifically related to reading, English, journalism, speech, and theater at all levels. ERIC/REC also covers interdisciplinary areas, such as media studies, reading and writing technology, mass communication, language arts, critical thinking, literature, and many aspects of literacy.

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Dedication

To Chet, who gave up another summer so I could write the next edition. We have only so many summers in this lifetime, thank you for letting me spend them with you.

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The Online Classroom: Teaching with the Internet

by Eileen Giuffré Cotton

Third Edition

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A book is the work of many people, not just the author. Specifically, I want to thank all the K–12 teachers who gave me ideas for lessons, the folks at ERIC/REC for their time, energy and patience, and my friends and colleagues for all the encouragement they gave me. Thank you one and all.

About the Author

Eileen Giuffré Cotton is a worldwide teacher. She has taught in public schools in California, at the University of Guam and now as a Professor of Education at California State University, Chico where she teaches Reading. Her travels have taken her to every state in the U.S. and all but one province and territory in Canada, the British Isles, the Orient, and Down Under. Her summers are spent in Wyoming with Chet (her husband of 26 years) on their mountainside, where she wrote *The Online Classroom*. She collects teddy bears, drives a diesel pickup truck, likes RVs and steam engines, and recently bought her seventh (or eighth) computer. She divides her time between the The Star Valley in Wyoming and The Big Valley in California.

Dr. Cotton's scholarly articles are in print throughout professional literature, but you are more likely to encounter her making a presentation at a conference or workshop—she loves to work with teachers. *The Online Classroom* is also an online course at Indiana University. To find out more information about the course, go to: **http://education.indiana.edu/~disted/530ol.html**.

CHAPTER	GRADES			
	K–3	4–6	7–8	9–12
1: The World Wide Web		n/a		
2: A Wealth of Web Sites		b	b	b
3: Using the Internet for Teaching—Rules for the Road		n/a		
4: Searching on the Web—Directories and Search Engines		b	b	b
5: Developing and Designing a Web Site		b	b	b
6: The Past, Present, and Future of the Web		n/a		
7: E-pals and Keypals	e	e	e	e
8: A Whale of a Time!		b	b	
9: The CyberNews		b	b	b
10: The ABCs of Canada		b	b	
11: Virtually Together in D.C.		b	b	b
12: Get a Job!				b
13: A Book an Hour			b	b
14: The Ambassador to Mexico WebQuest			b	b
15: The Games People Play	b	b	b	b
16: Just for the Little Kids	b			

e: E-mail **b: Web browser** **n/a: not applicable**

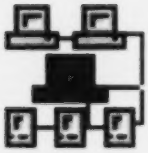
This matrix indicates the appropriate grade level(s) and required technology for the activities described in each chapter.

Introduction:

The Basics

I first heard about the Internet when I saw an advertisement for 10 free hours of America Online. I sent away for the program, and as soon as I got it, I loaded it in my computer, set up my modem, and away I went. It was fun, but then I like to push buttons and play with gadgets and toys, so connecting up to AOL was a logical extension of a natural bent. I started to play with the different departments available, and I soon ran out of free time. There was so much to do and so little time to do it! The next fall, my university provided all faculty members with an e-mail account and computer access to the Internet via Mosaic, Turbo Gopher, Fetch, and Telnet. Being the pro who had already played with AOL, I figured I knew what all this good stuff was about, so I set out to explore some more. I did not know then that my university offered so many more services than AOL, even though AOL had a prettier set of graphics. I've been using either my university server or a local service provider ever since.

I visited hundreds of sites and decided the Internet was a lot of fun and held great potential for my students, until I ran out of time again. Then came Winter Break. I spent 3,000 minutes on the Internet, exploring, learning, crashing into virtual walls, surviving the crashes, and becoming convinced this was not only a place to learn and have a good time, but also another way to teach my students.



The learning I was doing was fascinating and interesting. My perseverance paid off, and soon I wanted more out of the Net. I wanted to set up Web pages and develop lists and links and lessons for future explorations and learning. I wanted to get my students connected to the Internet so they could explore the usefulness of this tool. In a nutshell, all the surfing and crashing I did led eventually to this book.

Organization of The Online Classroom

This book has two sections: *Learning* and *Lessons*. The first section deals with the programs you will need to use the Internet, as well as 100 great Web sites for teachers, how to manage the Internet classroom, and how to search the Internet effectively and easily. The second section contains lessons with clearly stated goals, rationales, objectives, procedures and evaluation guidelines. There are two new additions to the third edition: Black Line Masters that you can reproduce for your students to make teaching with the Internet even easier, and Evaluation Rubrics that consider each aspect of the activity. I have found out that a typical "grading" strategy does not seem to work for Internet lessons. So, for the past year, I have gleaned ideas from the teachers with whom I work, and these rubrics are the results. I hope you find them useful.

Unlike many books about the Internet, this book starts out with the easiest things to do on the Internet and progresses from there. As the book proceeds and you become more confident, the chapters become more challenging. In addition, because I want you to feel comfortable using the Internet, I encourage you to have lots of practice using the relevant software before your students access it.

When you feel confident about using the Internet, you will be able to teach with it better. To make the lessons more accessible, all the URLs (Uniform Resource Locators or "links") you'll need are written for you. They are located at the Web site for *The Online Classroom* at **http://www.csuchico.edu/educ/3toc.index.html**

where you can click on them directly. As you look at the lesson plans, you will see that some can be finished in a single day, while some are units of instruction that will take from two to five weeks (or more) to complete. You can use this book to integrate use of the Internet into your entire classroom curriculum. Once you have grasped the basics of how the Internet can serve you as a teacher, you will be "walking the Web" to explore your own questions and interests. You will discover the wealth of information out there that you never imagined was so readily available. You may reinvent your entire approach to teaching and learning. All of that is up to you.

You will notice that I have not stated exact grade levels for the lessons. I've been using computers and the Internet with elementary, middle-school and high-school students, so each lesson is designed to adapt easily to your specific classroom situation. You can make each lesson either easier or more difficult, depending on the grade level and ability of your students. When students are learning something new, they do not seem to mind material that might appear too simple; however, once they have learned a particular Internet process or technique, most students are able to find their appropriate levels of use and engagement.

All of the lessons encourage small-group work and cooperative learning. Sitting in front of a computer by oneself can be lonely. Working with someone else is more interesting and fun, and it doubles your thinking and creative power, as well as your ability to troubleshoot and solve problems. The Internet itself is based upon connections between ideas, and when two or three students work together at an Internet-connected computer, the potential for connectivity increases exponentially. These pages, therefore, do not contain quiet-corner lessons that will not disrupt a classroom full of students. These lessons will stir up the noise of learning and provoke talk and laughter. This is good. Your job is to encourage the positive noise and discourage the negative, while monitoring the process to ensure that your students are walking the Web safely and staying on task. In addition, if you share the experience of learning how to use the Internet with a fellow teacher, you will enjoy both the book and the Internet more too.

Time

"All of this sounds great," you are probably thinking to yourself right now. *The Online Classroom* has directions for using the most popular software needed to access the Internet; it has lessons you can use right away; it has its very own Web site at **http://www.csuchico.edu/educ/3toc.index.html**, and it is associated with a three credit-hour graduate level class at Indiana University that you can register for *now*. Just visit the the IU distance education page at **http://education.indiana.edu/~disted/530ol.html**. What's the problem? The problem is *time*. The Internet, like a huge shopping mall, is sometimes hard to leave, as there is so much information out there and you want to see it all. Finding out new information that is of interest to me and my students, checking out the latest, up-to-the-minute news, and making connections with people and ideas half a world away, are very addicting pastimes. I have not yet solved this problem for myself, so I have little advice in this area to offer!

Are you ready?

By now, I hope I've whetted your appetite and you are eager to get started "walking the Web" and sharing the wealth of the Internet with your students. There is a lot more to learn, but the best way to *learn* is to *do*. Are you ready to put on your Web-walking shoes? Let's start walking the Web of information!

Section 1

Learning

Chapter 1:

The World Wide Web

If you read an Internet book published as late as 1994, you saw the wonders of Gopher and Telnet lauded, and you were told how to access GopherSpace and FTP archives. Yet, if you kept reading, you probably became confused. These programs are still used, but they are not nearly as user friendly as a World Wide Web browser program. Thank goodness times have changed!

Before I explain why Web browsers are such a big improvement over Gopher, Telnet and FTP, I need to explain how the Internet works. I'll try not to be too technical, but feel free to skip over the next couple of paragraphs if you are not interested in how the Internet connects us all together. The Internet is a worldwide network of computers primarily connected through ordinary phone lines. Some computers connected to the Internet are called "servers," and they store information that can be retrieved from other computers that are called "clients." When you use your computer to retrieve or download information from the Internet, your computer is a client getting information from a server.

The World Wide Web consists of connected servers and clients that communicate using a common set of communication protocols. Using the same protocols allows different kinds of computers, from a million-dollar mainframe to a used PC, to communicate with each other. (Think of protocols as manners, like you use in a large family gathering—rules for how to leave the room politely, how to greet someone, etc.) These protocols allow your

computer (a client) to retrieve text, pictures, sounds, and other types of files from any other computer (a server), via the Internet. However, to retrieve that information, you need a program on your computer that understands these protocols: a Web browser.

There are many Web browsers out there. You see titles like Cello, Mosaic, Lynx, Netscape, MacWeb, and Microsoft Internet Explorer, among others. They all fall into two main categories: text-based and full graphics-based. A text-based browser (like Lynx) allows you to see just the words, whereas a full graphics-based browser lets you experience text as well as images, sounds and even animation. The graphics-based browsers are far more appealing to the average user, though they can be slow to use.

The first Web browser I used was Mosaic. Mosaic was marvelous, if a little slow. Then I read on a listserv that I could download a Web browser for free from a company called Netscape. So, I downloaded Netscape 1.0 and gave it a spin. I have not used Mosaic since. Since then I've downloaded various updates of the original Netscape (1.1, 2.0, 2.02, 3.0, 4.0). Just recently I downloaded another browser, Microsoft Internet Explorer, which is the primary rival to Netscape in the "browser wars" you may have heard about. Netscape Navigator and Internet Explorer are the best browsers available right now. Tomorrow or next week, someone else will develop a better browser, with faster download times, more built-in multimedia, and bells and whistles I cannot imagine. The Internet and ways to navigate it are changing every day. To be a successful Web walker, you need to be flexible. If you're not flexible, you can easily become tangled in a spider Web of information!

Browser programs, for now at least, are available free for downloading from Netscape **(http://www.netscape.com)** or Microsoft **(http://www.microsoft.com/ie/)**. Once at either site, you will need to indicate the type of computer you have (Macintosh, Windows, DOS, UNIX), click on the correct link, and wait while it downloads. Both of these Web sites are busy, so the companies have provided mirror sites with the same programs.

These programs are easy to download, but they may take thirty minutes or longer to download because of their size! If you've never downloaded a program, you can also purchase the software at your local computer store.

Browsers

To work with any browser, you need to know some technical vocabulary. All the words I'll be using are in the Glossary at the end of the book, so if you come across something that is confusing, look back there for a friendly definition. For the purposes of this discussion, I'll use Netscape Navigator, but Microsoft Internet Explorer functions in a similar way.

The Netscape browser window

Look at the picture of the Netscape screen above, and let's play with the buttons to find out what they do. If you have Netscape loaded on your computer, work with both your computer window and the pictures in the book, as it might be easier. If your computer and your browser are different from mine—and they probably are—don't worry, as you will see they are similar enough. Each browser looks different on each platform version

(Macintosh, Windows, Windows 95, UNIX), so be patient, be flexible, and translate what I am saying into what you see on the window before you. Netscape relies on these buttons and pull-down menus as the easy-to-operate controls of the program. You need not memorize them—it all comes with practice.

Tool Bar Buttons

The first row of square buttons is called the "tool bar display," and the first button you see is **Back**. If the Back button is faint, then it is not yet activated—since you have not gone anywhere yet, there's no "back" for Back to go to. As you walk the Web, Back will darken; now you can click on Back to go back to wherever you were before, one step at a time, until you finally come to where you started.

Netscape's "tool bar display"

Click on **Forward** and it takes you forward along the path you have been traveling. This way you can move back and forth, revisiting sites without losing your way or having to key in long URL addresses.

Home will take you all the way back to the opening Web page where you started. The default home page for Netscape is the Netscape Web site, but you can change that by going into **Options**. I recommend that you change it, because when everyone has their browser programmed to the same default home page, you will experience a very long wait time to get started. I'll explain how to set your home page in the section on Preferences.

Click on **Reload** when pages don't come through completely or when Netscape bogs down and seems to need to start over again. Reload will give you the newest version of the page you are looking at. This is especially important when you are visiting a

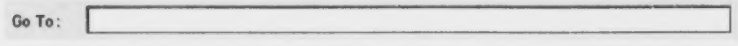
site that changes frequently. At some Web sites you can click on Reload every few minutes to reveal a new picture of say, the weather outside in Amsterdam, or stock market information.

Images will turn on the graphics (if you have them off). I used to turn the "auto load images" function (located in the pull-down menus, which I'll talk about later) off because large images take a long time to load. If you have the Images turned off, and you see an icon for an image, you can always click that icon to see the image. I don't go through this process anymore. I keep the "auto load images" function on and wait for the pictures to load. As Web pages have become more sophisticated, it's difficult to find out their content without seeing the graphic images. However, if you have a slow or old computer, you might think about turning the images off.

Open allows you to move to a new Web site. A dialogue box will appear where you type the Web site address or URL (Universal Resource Locator) you want to go to. Hit the **Return** key or click **OK** on the window, and your browser will take you there. **Print** prints the page. **Find** will help you locate something quickly on the Web page you are reading by doing a keyword search.

Stop can be one of the most useful buttons around. Sometimes your browser will grind and grind, and will grind forever, trying to load a document. Click on Stop and about 80% of the time it will stop! Then, when you start over, the page may load like a charm (and they call this scientific!). Stop is a great time-saver; one that I use a lot. Most browsers have a Stop function! Thank goodness, since waiting is something that I am not good at doing.

The **Go to** or **Location** box is located under the tool bar. This box displays the URL where you are right now, or you can type the URL of the next destination you want to go to. In this way, it has the same function as the Open button.



Netscape's Go To box

Directory Buttons

Directory Buttons make up the third row. Click on **What's New** to see some of the hundreds of new Web sites that appear each

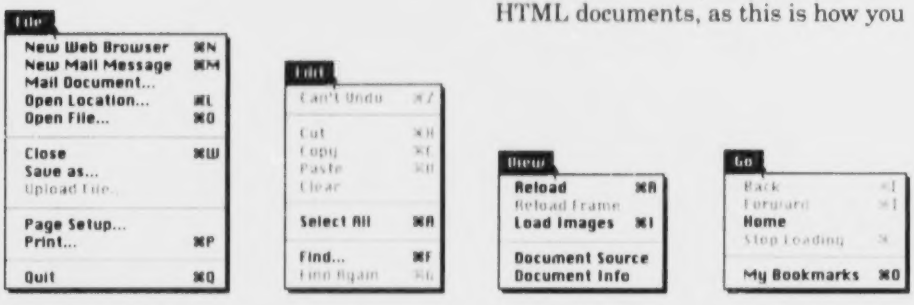
Netscape's Directory Buttons

week. **What's Cool?** presents a list of potentially fun and interesting Web sites for that week. **Destinations** will take you to more interesting Web sites. **Net Search** and **People** provide you with a list of search engines and directories for the World Wide Web for both URLs and e-mail addresses. These buttons give you the capability to search the Web, either by keyword or by category. The last button is **Software**. Click on it to discover the latest software available from the Netscape folks.

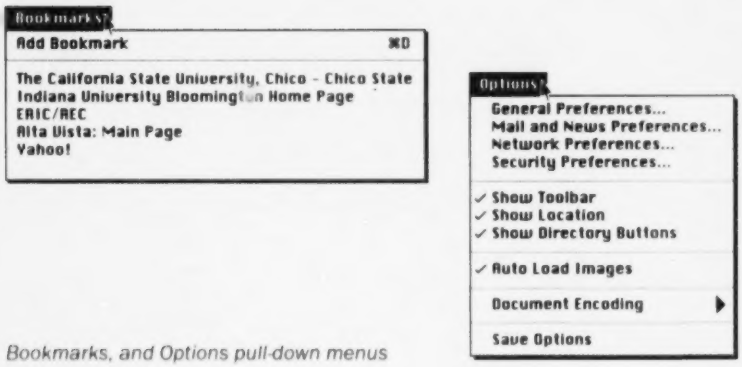
If you have a small screen, the tool bar buttons and directory buttons can be turned off. Many of the features they offer are also available in the pull-down menus, which I'll talk about next.

Pull-down Menus

Pull down **File** and scroll down past **New Browser** and **New Mail Message** to **Open Location**. **Open Location** is the same as the Open button. **Open File** will open an HTML file from your hard drive or a diskette, as opposed to an Internet file. Open file is used a lot when you are creating HTML documents, as this is how you



File, Edit, View, and Go pull-down menus



Bookmarks, and Options pull-down menus

check them for accuracy. (I'll explain this in more detail in Chapter 5.) File is also the location of **Page Setup** and **Quit**. Always know how to quit a program!

Pull down **Edit** and you see the usual **Cut**, **Copy**, **Paste**, **Clear** commands you find on most word processing programs. There is also a **Select All** option that lets you group all the pieces of a whole Web page together. The Edit commands come in handy when you are using a browser and a word processing program since they allow you to use all the normal word processing functions such as blocking, copying, and pasting from the browser to the word processing program.

Pull down **View** and scroll to **Document Source** to see how that Web page is written in HTML source code. This is a very educational thing to do. In Chapter 5 you will learn more about HTML. Pull down **Go**, and you are greeted with a history of the most recent sites you have visited during your current Web-walking session. Pull down Go and click on the title of any document, Web page, or link to which you would like to return directly (as opposed to going Back one step at a time). Pull down **Bookmarks**, click on **Add Bookmark**, and *voila*, whatever URL is currently on your screen will be added permanently to your bookmark collection—yours forever until you delete it. (URLs in Go are not saved; when you turn Netscape off, everything in Go will be gone.) As you walk the Web, you will find sites to which you will want to return again and again. Bookmarks allows you to save your

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favorite URLs for quick and easy access. My bookmark collection is very large, and with the newer browsers it is really easy to organize. Just mouse over to **Window** and scroll to **Bookmarks**. Click on it and you will see your list of bookmarks that you can organize into folders and then sort in alphabetical order if you want. If you are using Internet Explorer, **Favorites** is the same as Bookmarks. Bookmarks is as nifty a time-saver as Stop.

Pull down **Options** to set up Netscape to suit your needs. You can set **Preferences** for the general display, mail and news, network, and security. You can turn off and on the **Tool Bar**, **Location**, **Directory Buttons**, the **Java Console** and **Auto Load Images**. Depending on which version of Netscape you are running, you will see slightly different iterations of this pull-down menu.

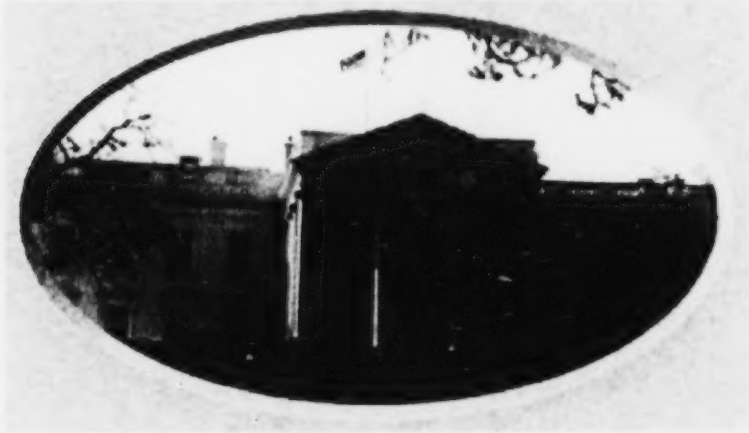
Pull down Options and scroll to **General Preferences**. A window will appear showing a set of file tabs. Click on the **Appearance** tab. The screen is divided into three sections: **Toolbar**, **Startup** and **Link Styles**. Look in Startup and you will see a prompt that says "Browser starts with" then "blank page" or "home page location" and a box. In that box, type the home page you would like to see every time you start up your browser. I set my husband's browser to show my picture every time he starts up so he won't forgot who I am. If you are learning how to use the Internet, might I suggest you start out with **http://www.csuchico.edu/educ/3toc.index.html** which is the home page for this book. That way, you can read the chapters and click on the appropriate URLs at the same time.

Opening Your First Web Page

"Half the fun of going is getting there," say the tourist agencies. Now that you know how to have fun getting there, where is it, exactly, that you're going? Your Web-walking destinations include just some of the 90 million Web pages out there. They are front doors to libraries of knowledge, and they are just a URL away.

Let's Web walk over to one of the most famous addresses in America, 1600 Pennsylvania Avenue, Washington, DC: The White House. Remember, in a browser, the address is called a Uniform Resource Locator or URL (frequently pronounced "earl") and it is

written in a completely different format. Click on OPEN, and when the dialogue box appears, type in this URL: **http://www.whitehouse.gov/** (note that there are no spaces in this address—*no* URL has spaces—and it's in all lowercase letters—also very important, as URLs are "case sensitive"). In a few seconds, you will see a picture of the White House and you're in! (No security checks, no waiting in line, *this* is access!) After the greeting (which changes according to the time of day) and the picture of the White House (which also changes according to the time of day), scroll to the eight buttons: President and Vice President, Citizen's Handbook, Virtual Library, Help Desk,



What's New, White House History and Tours, Briefing Room, and White House for Kids. Click on any of these buttons and be treated to what is happening at the White House. I especially like the History and Tours button as it gives a brief biography of each of the presidents and first ladies, but the White House for Kids button leads to a lot of information, too. Click away on the different buttons and see what happens. Click on any of the links, and away you go—Forward and Back, click and surf. You've got the idea! Cool!

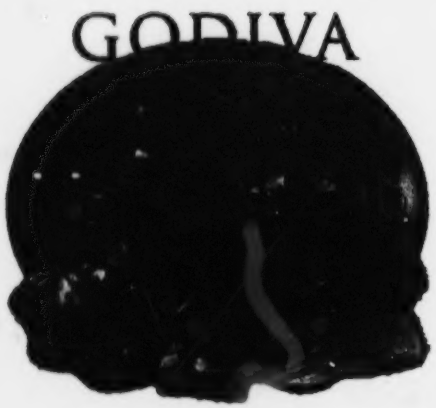
Scroll down that page and you will see some words and images are underlined (if you have a black and white monitor) or written in a different color (if you have a color monitor). Click on these underlined/colored links and you will automatically be transported to a related Web site. The first time I did this, I was

already thinking: "This home page is going to make a great lesson for my class!"

By pointing and clicking in your browser, you have already become a Web walker. You can point and click along these HyperText hotlinks to millions of home pages. Since thousands are being added each week you have unlimited opportunities for finding great teaching materials.

Try another Web site. Click on Open and type in this URL: **www.ceismc.gatech.edu/BusyT/** for the Busy Teacher Home Page. Here you will find links to resources related to: Archaeology, Art, Astronomy, Biology, Chemistry, Computer Technology, Ecology/Environment, Elementary School, English, Geology, High School Guidance and Counseling, History, Mathematics, Paleontology, Physics, Recess, Sciences (Other), Social Studies, and a Teachers' Reference Section. Carolyn Cole, who designed this Web site, wanted to provide teachers with an easy-to-use source for materials, lesson plans, and classroom activities. This Web site is easy to understand, so it is great for the Internet beginner, and a time-saver for the Internet pro.

If you love pets, try NetPets. Click on Open, type in **http://www.netpets.com/**. I prefer the Godiva Chocolates home page myself at **http://www.godiva.com/**, but alas, I'm not sure if it has any curricular value.



You have just typed in a few somewhat complicated URLs and you may be wondering why they have to be so long and complex. With so many new Web sites being added each week, and each one needing a unique URL or address, they have to be long so they can be different. Once you know how to decode

the letters and numbers of URLs, however, they become a little easier to cope with and remember. Let's decode the URL for the White House home page:

http://www.whitehouse.gov/

http://	means it uses HypertText transfer protocols (the manners of the Web)
www	means it appears on the World Wide Web (all URLs used to start with www, but it is not always that way now)
whitehouse	is the name of the server or computer used to store the Web page
gov	is the domain of the server, in this case it is a governmental machine

You are probably now wondering what I'm talking about. I'll try again. All documents on the Web are written in something called HTML (HyperText Markup Language). HTML lets you follow the links (or underlined or colored words and phrases) on a document to go to another document. These links allow you to move from one location on the Web to another at the click of your mouse. Therefore, an address that begins with **http://** is one that is written in HTML which may include links to other pages on the Web. In some browsers you don't even need to type in the "http://" part of the URL. In Netscape and Explorer, for instance, http:// is the default mode and not necessary to get to a desired URL. This is a nice time saver as I get tired of typing colons and slashes all the time. You may have noticed that when you see URLs on television and magazines ads, they usually look like: **http://www.bigcompanyname.com/**. Well, now with either Netscape or Explorer, all you have to do is type in bigcompanyname, and the browser will add the rest. Pretty cool!

Every piece of information on the Internet is on a computer (server) somewhere in the world and every computer has a name. That name can be a word or a number. The name of the computer for the White House is called **whitehouse** (which makes a lot of sense to me).

Finally there is the domain or suffix, or area of specialization, of the server. There are many different domains, all of which represent the type of organization or business that the server does. These domains are written using a dot and three letters. "Dot g-o-v" stands for government and sure enough, the White House is part of the government. Other domains include **.edu** for higher education; **.com** for commercial; **.k12** for K–12 education; **.org** for nonprofit organization; **.net** for network; and **.mil** for military. There are a total of 37 different domains, however, those listed above are the most common. Sometimes if I know how to decode a URL, I can determine if it is a reliable source of information. For school purposes, I look for Web sites in four domains as they tend to have more accurate information, fewer advertisements and are generally safe for children. My four favorite domains are .edu, .k12, .gov, and .org. For example, I feel the information from a Web site developed by educators is more unbiased, possibly more accurate, and more child-safe, than a Web site developed by a commercial operation. While this is not always the case, it is one of the rules of thumb I follow. This will make more sense as you surf the Web. Honest!

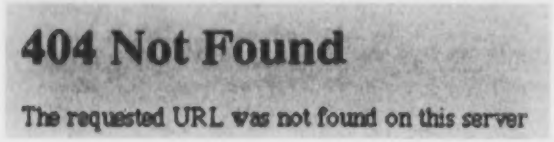
In addition to domains or suffixes, some Web sites also tell their country of origin. These are denoted by a letter state and/or country abbreviation after the domain. Thus, .jp means the computer is in Japan, or .mn.us means the computer is in Minnesota, in the USA.

What To Do When You Don't Get To Where You Want To Go

Sometimes when you are browsing the Web, you are met by one of a dismaying array of negative responses. Among these are "403 Forbidden," "404 Not Found," and "Unable to connect to host."

Wow! How can something on the Internet be "forbidden?" If you get that warning, you are being told that you need to have a subscription or membership or password to access the site. Sometimes these are free sites, sometimes you have to pay, but in either case you will need to register for the site in order to get there. After you register, you will be given a password (which you must remember) to access the Web site again. No password, no go.

The "Not Found" message may indicate that the targeted Web site has moved to another location, has changed its name and URL,



has just disappeared, or your Internet provider cannot find the location. When you get this message, try again in a little while, and it might be found. If it still is not found, then you might have to use a search engine and find the new URL, if it exists.

"Unable to connect" means the site is probably busy, just like your telephone is busy once in a while. If you try at another time, you might be able to connect. At the beginning of the semester when all the students are back on campus, I get the "Unable to connect" message often because all the lines are busy! Once school has been in session about a month, the message rarely appears.

Sometimes you may have trouble getting a URL to work. If so, truncate the address—don't type the whole thing, backing up a segment at a time from the right-hand side—and try it again. Sometimes nothing seems to work, your computer seems to be getting clogged up, everything's down, and your browser just cranks and cranks away, but goes nowhere. That's when it's time to do one of two things: Clear the Cache or pull the plug. To Clear the Cache, go to the Options pull down menu and scroll down to **Network Preferences**. Click on it and a window will appear that has several file tabs. Click on the tab that says **Cache**. The Cache is a collection of many of the documents and graphics that you have viewed on the Web. Since you may often revisit some Web sites, our browsers will save images and documents your frequently request on the hard drive of your computer. This saves a lot of time. Imagine your computer downloading a new copy of the Yahoo logo every time you did a search there. It's a real time saver. However when the Cache gets full it slows down the browser. When this happens, click on the "clear cache now" button and soon the file will be empty. If your cache was full, then the speed of the computer and browser will be back to normal. If that

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does not work, and your browser still seems to be S-L-O-W, log out, get out of Windows or restart your Mac. When you fire it up again; it'll probably work. I know this sounds strange, but the Web and browsers are not user friendly 100% of the time!

The Web is a living, growing, rapidly changing thing. There's no guarantee that a Web site you found yesterday will still be there tomorrow—and likewise, no guarantee that the Web sites that I recommend in this book will necessarily still be there when you try to find them. That's another reason to have the URL for this book on your bookmark list. When I find a Web site has been changed, I update the Web page. Please help me out. If you should see that one of the Web sites in this book is no longer working, write to me at cotton@instruction.com and tell me the problem. The next time I update the Web page for the book, I'll change that URL. If you forgot, the Web page for the book is **http://www.csuchico.edu/educ/3toc.index.html**.

Surfing the Net or Mining the Web?

Now that you know how to ring the bells and blow the whistles, it's time to play a tune. Web walk with abandon—play with the buttons and pull-down menus to find out what they do! See what you can find! Let the kid in you come out—go ahead, you can't break the machine or wreck the program (well, probably not)! You'll be surprised at how easy it is to use these comprehensive, Web-embracing browsers. Click on What's New? and What's Cool, then try Net Search and range widely. See for yourself what you think of this tool for exploring the resources on the Internet.

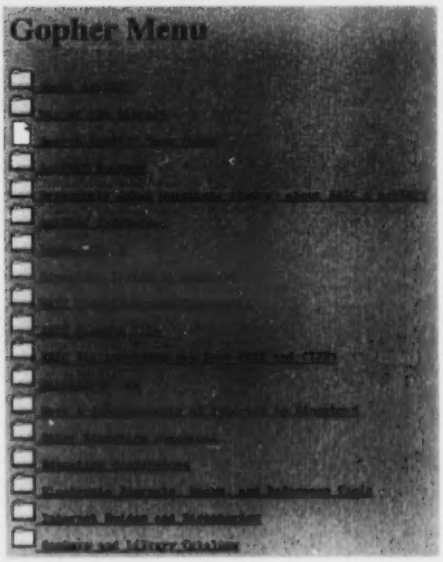
The beauty of most browsers is their similarity. Most have nearly identical functions, although the terminology for their buttons and options may differ. Netscape and Internet Explorer are the cool browsers this week—but next year? Who knows? I contend that if you have worked with either one of these browsers, you will be able to work with the newer browsers as they are developed. After

you walk around the Internet for awhile, you will start to click on connecting links and get to worlds and places you did not believe existed. When you start getting serious about using this tool for learning, you are no long surfing the Internet, you are *mining* the Web for information. This is the serious business you want to involve your students in doing. This is where you start learning and using information gleaned from various Web sites.

Don't Read this Part Yet!

At the beginning of this chapter, I imply that the World Wide Web is the future, and I say that Gopher, FTP and Telnet will soon be things of the past. It's nearly that way now. Unless you know about Gopher and FTP and Telnet, the next couple of paragraphs will be meaningless to you, so skip right over them if you like.

Here's why using a Web browser is better than all the other programs put together. If you want to access a file in GopherSpace, you do not need to change navigation programs—stay in your browser. At the URL prompt, type gopher:// in lowercase letters, followed by the address you want in GopherSpace. When you click Return, a familiar looking set of gopher files will appear, and you can surf away in GopherSpace using your browser.



The same is true for FTP. At the URL prompt, type ftp:// and the address you want. The same prompts for FTP will appear, and you take it from there. This is so much easier than having to work with three or four different navigation programs. The beauty of a Web browser is the ease with which you can go anywhere on the Web.

Why don't you give this a try. In your browser, open this URL: **gopher://ericir.syr.edu** and you

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will get the ERIC (Educational Resources Information Center) Gopher (which is really the ERIC Web pages without the pretty pictures).

To "work" a gopher screen like the one above, just click on any of the file folders and you will be transported to that item. I recommend that you try "Lesson Plans" and see what ERIC has to offer. You'll be pleasantly surprised. GopherSpace is slowly disappearing on the Internet and being replaced by more graphically impressive WWW documents. It's only a matter of time before Gopher will be completed gone.

In this chapter, I offer you no other "lesson plan" than this: After you have walked the Web with your browser for awhile, it might be time to take your newfound knowledge to your classroom and demonstrate the power of the Internet to your students. Show them some of the things you have discovered thus far. Share your excitement and amazement with them. Give them a Web-walking tour and if you are brave (and have the equipment), a set of URLs for them to explore. This is a tough lesson to evaluate, but you should be able to see eyes wide open in wonder and fascination, and you'll hear lots of noise! If you see and hear the above, the lesson was successful!

Chapter 2:

A Wealth of Web Sites

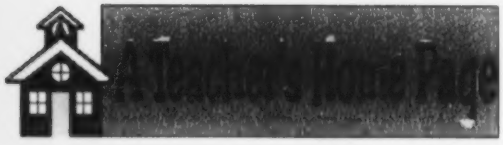
The Web has thousands of resources, but the type of resource I like the best are the "megapages." A megapage is a Web site that contains links to lots of different sites. They are handy directories that someone else has created to help you find stuff in a hurry. A great way to find tons of information and even more resources is to find some key megapages and then start mining. With so many sites on the Internet, and each one better than the one before, it would be pointless to try to say which ones are best. In this chapter you'll find over one hundred Web sites that you just cannot afford to miss if you're seeking resources for teaching. Some of them contain ready-made lesson plans, and others supply you with the information you need to design goal-oriented lessons that meet your objectives. Unlike journals or books, the Web sites are free, so click on Open and start typing in URLs, or go to **http://www.csuchico.edu/educ/3toc.index.html** and click on Chapter 2.

Let me put in a disclaimer, however. The following megapages are listed not in order of importance, but according to basic curricular areas, except the first one, which offers general K–12 resources.

General K–12 Resources

A Teacher's Place

http://pluto.njcc.com/~harris



Peter Harris, a teacher and computer specialist at Robbins Elementary School in Trenton, New Jersey, has designed this page with *you* in mind. The list of resources keeps getting better and his categories are fantastic. Check out the following: Associations; Teacher's Guide for Parents; Search Engines and Collections; Teacher Resources; Cooperative Education; Gifted and Talented; Internet and Education; Kid's Advocates; Literature; Storytelling and Theatre; Math; Science; Special Needs; Student Exchange Programs; and Writing.

Carrie's Crazy Quilt — Sites for Educators

http://www.mtjeff.com/~bodenst/page5.html

This all-purpose Web site offers curriculum resources in every area of study. The page starts with a list of search engines, then goes on to resources in general education, counseling and guidance, humanities, social science, science, math, Internet, and vocational and technical training. Carrie is a high school teacher, so she has a good idea of what teachers want the most. It is an easy-to-access Web page with something for every teacher. The "Sites for Educators" is just one small aspect of her Crazy Quilt, but it includes search engines, resources related to the state of Oregon, and general educational Web sites.

Classroom Connect

http://www.classroom.net/

The site for Wentworth Worldwide Media, Inc. has links to all of Wentworth's vast Internet resources, including their newsletter, lists of K–12 resources on the Internet, lesson plans, and lots more. This Web site is updated often—these people are serious about teaching with the Internet! I like to stop at this site periodically just to see what's happening. You can also subscribe to their *Internet Newsletter* which arrives regularly in your e-mail box. Each edition is full of good information about some aspect of the Internet, as well as lesson plans, pointers to other resources, and calls for electronic pen pals.

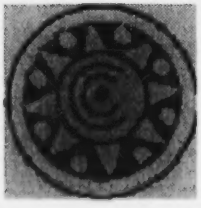
Cool School Tools

http://www.bham.lib.al.us/cooltools/

When I first saw the title of this Web site, I wondered why I had not seen the cute little rhyme before. This Web site created by Birmingham, Alabama schools, is an index designed specifically for children and teens. The index is easy to read and includes categories in General Resources; Philosophy and Psychology; Religion; Social Science; Language; Natural Sciences and Math; Technology; The Arts; Literature and Rhetoric; and, Geography and History. You should check out the ancient history sites while you are there.

Common Knowledge Pittsburgh

http://info.pps.pgh.pa.us/local.html



The main page is a twelve-box matrix with all sorts of information about Pittsburgh Public Schools. I particularly like the box labeled "Internet Resources," which has its own URL at **http://info.pps.pgh.pa.us/k12/www.html**. Here you can find other schools on the Net and general education resources, as well as resources for culture, language, the arts, and more.

EdCentral Home Page

http://www.ehhs.cmich.edu/

Provided by Central Michigan University, this site claims to be the "Communication and Resource Center for Professional Educators." The site has three major areas: Education Central; The Educational Environment, and Focus on the Profession. EdCentral provides teachers with different definition of resources available on the Internet. While you are here, check out Power Worlds and Instructional Resources. It's definitely worth your time to look at this site.

Kathy Schrock's Guide for Educators

http://www.capecod.net/schrockguide

Kathy has been working on this Web site for years, and it keeps getting better. Here you can find resources for every curriculum area, easy-to-find search engines and directories, lessons about using the Internet, and more. It is truly an amazing Web site and one you need to keep going back to time and again.

K–12 Sources — Curriculum — Lessons Plans

http://execpc.com/~dboals/k-12.html

One of my students found this page. She said "Eileen, you won't believe all the stuff on it." And she was right! When I first started going to this Web site, there were only 185 links to sites of an educational nature. Now there are too many to count. This mini-directory has everything from the Virtual Frog Dissection Kit (yuck!) to Music. Don't miss this Web site. If you want to find something specific on it, use the Find button in your browser to help out. "The major purpose of this home page is to encourage the use of the World Wide Web as a tool for learning and teaching and to provide some help for K–12 classroom teachers in locating and using the resources of the Internet in the classroom." That's something I believe in! If you check out all the resources listed, you will never leave your computer.

Kid's Web

http://www.npac.syr.edu/textbook/kidsweb/fastindex.html

This is a popular site, so don't be surprised if it is busy. The main Web site is a table of contents with listings in four general areas: Arts, Sciences, Social Studies, and Miscellaneous. Each general area has subcategories. Also listed are links to other digital libraries, other collections of Web sites for kids, and a list of some K–12 schools on the Internet. This page is part of *The Living Schoolbook Project* from Syracuse University. To find out more about that project, type in this URL: **http://www.npac.syr.edu/projects/ltb/**.

Live Text: Institute for Learning Technologies—topics list

http://www.ilt.columbia.edu/k12/livetext/topics/

Teachers College Columbia University has created this guide to help initiate experienced educators into designing constructivist, cooperative learning projects revolving around the use of the World Wide Web. Topics range from Acceptable Use Policies (more about these later) to Writing.

McRel Internet Connections

http://www.mcrel.org/connect/

McRel stands for Mid-continent Regional Educational Laboratory, one of several regional labs across the country. Check out all the Regional Labs at **http://www.nwrel.org/national/** for information about their specialty areas and resources that are available. The specialty area of McRel is Curriculum, Learning and Instruction. McRel provides federally-funded services to Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming. Click on Internet Connections and find links to Special Connections, Education Resources, Subject Area Resources, Resources by State, and Internet Resources. You can also find Acceptable Use Policies here.

NetLearning: Why Teachers Use the Internet

http://www.songline.com/teachers/index.html

This is a Web site for teachers who want to foster online learning. Here you can find out how to teach with the Internet with one computer and a modem. There is also a wealth of topics to read about including Acceptable Use Policies, Internet filtering (or censoring) programs, educational technology, grant resources, online projects and student publications; as well as resources in animals and insects, geography, the arts, government, languages, literature, math and science. There is a "Top Ten List" of reasons teachers use the Internet.

Curriculum Storehouses with a Twist

http://www.songline.com/teachers/storehouses.html

A link from the Web site above, here you can read annotations on some good storehouses of information for teachers. Check out the Montessori Education Page and Houghton-Mifflin's Educational Place. These are just two examples of resources available.

The New Jersey Curriculum Home Page

http://njnie.dl.stevens-tech.edu/curriculum/currichome.html

This Web page of projects has been designed by a New Jersey Team of educators. The collaborative projects all focus on using real-time data that is available from the Internet. The projects deal with topics ranging from global weather conditions, variations of the boiling point around the world, ocean research, water conditions, plate tectonics, architecture, and more. If you want your students to reach peers and experts from all over the world, check out this Web site.

Pacific Bell Blue Web'n

http://www.kn.pacbell.com/wired/bluewebn/

Pacific Bell has collected some of the best lessons, resources, activities and projects available in Science, English, Math, History, Art, Business, and more. Scroll down to the Applications Table and be treated to some of the best Internet resources around. Each one has been screened using their complex evaluation rubric found at **http://www.kn.pacbell.com/wired/bluewebn/rubric.html**. This is also a helpful rubric to keep in mind when evaluating student Web-design work.

Sholom's Resources for Students and Teachers

http://www.interlog.com/~sholeise/ResourceTables.html

Sholom has found resources for his students in six major areas: Education, Humanities, The Sciences, Computer Technology, Mother Earth and Miscellaneous. It has an easy-to-use matrix that my students seem to like, and if you have questions, you can e-mail Sholom, who is more than helpful. Don't forget to check out the Canadiana box.

Steve and Ruth Bennett's Family Surfboard

http://www.familysurf.com/

Two parents created this site to help other parents enjoy the fun of educational computing with their children. There is information about good sites for kids, lots of online activities, and a forum on how families can deal with computing issues in their household. It does not take a large leap of the imagination to make this page useful for teachers.

Teacher Pathfinder: Educational Village

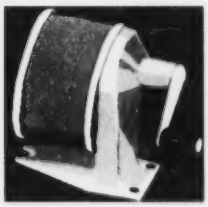
http://teacherpathfinder.org/

This Web site was recommended to me by a teacher. It has a colorful resource list as well as information source that is quite extensive. Click on the Schoolhouse for a great list of tools you can use in your classroom.

Teachers Helping Teachers

http://pacificnet.net/~mandel/index.html

The purpose of this site is threefold: 1) provide basic teaching tips to inexperienced teachers—ideas that can be immediately implemented in the classroom; 2) provide new ideas in teaching methodologies for all teachers; and, 3) provide a forum for experienced teachers to share their expertise with colleagues around the world. The Web site offers a chat area for teachers as well as a friendly environment.



The Teacher's Desk

http://mycroft.mexia.com/~judihar/tdesk2.html

Judy Hardison is the teacher and she has an unusual sense of humor. I like this page. It is not just the usual list of links, (although a list is there, you just have to look for it). At this site you can read about her twist on the traditional curriculum and how to use the Internet to enhance it.

The Teacher's Resource Page

http://www.geocities.com/Heartland/4251/teacher.html

There are many teacher's resources pages on the Internet, yet this is a particularly interesting one as it contains links to national educational organizations, child safety, filtering programs, peace studies, character education, creative writing (called "Brain Bait"), folk tales around the world, and more. It is a varied collection of Internet resources that is very useful for teachers.

The TradeWave Galaxy

http://www.einet.net/galaxy.html

I'm not sure if this is a general directory, the index to an encyclopedia, or what. This site includes hundreds of links to Arts & Humanities, Business and Commerce, Community, Engineering and Technology, Government, Law, Leisure & Recreation, Medicine, Reference and Interdisciplinary Sources, Science, and Social Science. Each link leads you to topics that can be used in your curriculum. By the way, Education resources are listed on this site, almost at the bottom—click on Find and you will be taken there straight away.

Web Sites and Resources for Teachers

http://www.csun.edu/~vceed009/

Drs. Vicki and Richard Sharp are teachers at California State University, Northridge, (a sister campus to my California State University, Chico) who have collected Web sites and put them into eight categories: Language Arts, Social Studies, Math, Science, Art, Music, Just for Kids, and ESL/Bilingual. When you click on one of the categories, you are greeted with an annotated list of Web sites related to that topic. This is a well organized site that's maintained regularly, so there is rarely a dead link. I like that!

Web66: A K–12 World Wide Web Project

http://web66.coled.umn.edu/

Web66 is supposed to conjure up thoughts of Route 66 by taking you on a virtual tour of what's available for teachers on the Internet. And I think it succeeds. The College of Education at the University of Minnesota houses this fantastic site. With topics in Education, Technology, and Information, you are bound to find something useful. I like "Mustang" as well as the Web66 Cookbook for HTML, but those are only two of many excellent selections available.

State and Federal Education Web sites

US Department of Education

http://www.ed.gov/

Probably the first governmental Department of Education you should visit is at the Federal level. Read the mission statement of the Department of Education and the National Educational Goals, access education guides, and find out about education initiatives and grant opportunities. Here you can also read the latest information about bills going through Congress that will affect education. It's always nice to know what is going to happen and how it might effect you.

The Departments of Education in just about every state and US territory have posted huge resource pages with lots of links they think will be helpful to educators about state curriculum requirements and credentialing laws. To find a list of all governmental sites, check out the Piper List at **http://www.piperinfo.com/state/states.html**. Here you will find a clickable list of states and territories that will lead you to *all* the governmental services of that geographical area. The next task is to scroll down to the education listing.

If that list is too cumbersome, I've listed a few state Departments of Education that might be helpful. This is just a sampling of states, so your state might not be mentioned.

California Department of Education Goldmine

http://goldmine.cde.ca.gov/

This site has California curriculum frameworks, California legislation as it relates to schools and education, and links to lesson plans and other resources.

California Department of Education

Colorado Department of Education

http://www.cde.state.co.us/

There is specific information about Colorado here, but everyone should click on Electronic Resources and Information and Interesting Sites for Students, Teachers and Others.

Indiana Department of Education

http://doe.state.in.us/

Indiana has a good set of links to other Departments of Education as well as resources, Acceptable Use Policies and standards.

The Texas Education Network (TENET)

http://www.tenet.edu:80/

Texans do things in a big way, so this is a big site. If you are a registered TENET user, the whole site is accessible. If not, you can browse the TENET gopher, which is a pretty good consolation prize. You can also check out the Texas Education Agency at **http://www.tea.texas.gov/**.

New York State Education Department

http://www.nysed.gov/

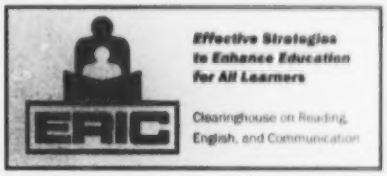
At this Web site, I particularly like the Resource Guides and the Current News, but other information about state licensing, graduation requirements, etc. are included.

And Now a Word from ERIC

ERIC Clearinghouse on Reading, English, and Communication

http://www.indiana.edu/~eric_rec/index.html

ERIC/REC are the people who publish this book. At this site you can find bibliographies and research summaries, search the ERIC database, ask questions of the ERIC/REC user services team and find out about professional development workshops in your area.


Effective Strategies to Enhance Education for All Learners
ERIC
Clearinghouse on Reading, English, and Communication

Link to the Indiana University School of Education at **http://education.indiana.edu/~disted/** for a description of courses offered over the Internet by IU. You can find information on a course called *Education L530: The Online Classroom* that's based on this book. There is also a comprehensive list of related Internet resources.

Ask ERIC

http://ericir.syr.edu/

There are over twenty ERIC clearinghouses across the country, each dealing with a separate database of knowledge. This is the "main" ERIC clearinghouse Web site. At this site you can search the database, Ask ERIC, tour a virtual library, view educational mailing list archives, and more. It has a large graphic at the beginning, which does take some time to download, but if you are impatient, the same information is written below the graphic. Take your pick as to how you want to view the page.

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Science and Math Resources

General Resources

The Discovery Channel School

http://school.discovery.com/

Every semester the Discovery Channel School offers several lessons that you can share with your students. Yours truly had the opportunity to work on one of them: the lesson "Baby Talk to Bytes." When you visit their page, click on How to Set Up a Classroom Newspaper on the Web. Also see Chapter 9 in this book for more information.

The Eisenhower National Clearinghouse for Math and Science

http://www.enc.org/nf_index.htm (no frames)
http://www.enc.org/ (frames)

This is a milestone Web site as far as I'm concerned. Here you can find wonderful activities to use in your classroom that have been written by teachers for students. Check out the math sites, the best school sites, and Internet tools for parents.

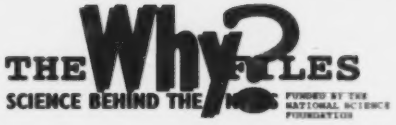
Frank Potter's Science Gems

http://www-sci.lib.uci.edu/SEP/SEP.html

Frank Potter and Jim Martindale mine the Web to find the best science sites for teachers. Currently the collection consists of 2000 sites with more being added on a regular basis. The sites are annotated and categorized according to grade level.

The Why Files: The Science Behind the News

http://whyfiles.news.wisc.edu/



This online newspaper tries to explain the science behind the headlines. Web walk here and click on previous issues, sports and science, a cool science image, and a Q/A forum.

SAMI (Science and Math Initiatives)

http://www.c3.lanl.gov/~jspeck/SAMI-home.shtml

I have found that math-related sites are difficult to find, but SAMI has some. The "chatback line," "mathematics and science curricula," "other resources," and "rural resources" are all worth viewing. Click on Lesson Plans and Projects, and find a list of links to both math and science.

Useful Science Web Sites

http://www.hkstar.com/~hkiedsci/de-web.htm

This Hong Kong Web site includes twenty-four links to other science sites. It is part of a larger site called Digital Electronics, which has a tutorial lesson for high school electronics. You can find it at **http://www.hkstar.com/~hkiedsci/homo.html.Introductory**

You Can with Beakman and Jack

http://www.beakman.com

This is the Web site for the television series *Beakman's Place*. Check out the question-and-answer section, see pictures from the Hubble Telescope, and just mine this site for fun and valuable information.

Planets and Space

NASA (National Aeronautics and Space Administration) Home Page

http://hypatia.gsfc.nasa.gov/NASA_homepage.html

NASA offers a wealth of goodies for teachers and students, and there are links to many other sites of scientific interest. There are also other excellent NASA sites on the Web, including the recent Mars exploration, and you can get to them from here. You'll probably find these sites busy at all times of the day and night, I've been successful about one time in three. It's worth the wait.

The Messier Science Page

http://seds.lpl.arizona.edu/messier/Messier.html

From 1758 to 1782, Charles Messier, a French astronomer, compiled a list of a hundred diffuse objects that he thought were comets. As it turned out, the "comets" were nebulae, star clusters, and other beautiful objects found in the night sky. The study of these objects by astronomers has lead to important, incredible discoveries such as the life cycles of stars, the reality of galaxies as separate "island universes," and the possible age of the universe. Go to this site to see some excellent graphics on the wonders of the night sky.

The Nine Planets: A Multimedia Tour of our Solar System

http://seds.lpl.arizona.edu/billa/tnp/

At this comprehensive examination of our solar system, you will find links to just about everything now known about our nine planets: moons, orbits, the Hubble telescope and its photos of outer space, and much more.

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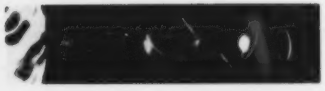
Ocean Planet Home Page

http://seawifs.gsfc.nasa.gov/ocean-planet.html

This Smithsonian exhibit looks at the power of the ocean. To quote them, "it plumbs the depths of the watery world" . . . but I wouldn't want to go that far. The many facets of this site will take some time to explore.

Welcome to the Planets

http://pds.jpl.nasa.gov/planets/



A tour of our Solar System from the Jet Propulsion Lab and the California Institute of Technology. This site goes along well with the Nine Planets Web site.

Stars and Galaxies

http://www.eia.brad.ac.uk/btl/sg.html

This site explains how stars and galaxies behave, their origins and life cycles, and how they generate energy. An audio portion at the beginning will take about two minutes to download.

Life Science

The Heart: An Online Demonstration

http://sln2.fi.edu/biosci/heart.html

This is a fantastic lesson about the heart and the circulatory system. I have shared this Web site with many teachers and so many have created lessons based on it. It is a natural for upper elementary curriculum. While you are here, click on the home page for this Web site, and find the Franklin Institute Science Museum at **http://www.fi.edu/**. You will not be disappointed.

Science Learning Network

http://www.sln.org/

Once you get to this science site which is devoted to inquiry, click on Resources and find lessons about water, hurricanes, the wind, and the Cow's Eye dissection.

The Cow's Eye Dissection

http://www.exploratorium.edu/learning_studio/cow_eye/

Along with a step-by-step lesson on the anatomy of a cow's eye, there is a short audio introduction with laughing kids and statements such as "gross." But hang in there. The purpose of this anatomy lesson is to learn more about how the eye works. While you are here, click on the Eye Primer.

The Visible Human Project

http://www.nlm.nih.gov/research/visible/visible_human.html

The idea of this project is to create a three dimensional view of a human male and human female. While quite complex, it is interesting. The Web site requires a browser that can interpret Java (not the caffeine variety). Check out the Medline for health information at this location.

Virtual Frog Dissection Kit

http://george.lbl.gov/ITG.hm.pg.docs/dissect/info.html

The University of California at Berkeley and the Lawrence Livermore Labs offer a good way to familiarize your students with the anatomy of the frog, without having to breath formaldehyde or handle a dead amphibian (a major disappointment, I admit, to a true-hearted future biologist). The Dissection Kit is a superb application of virtual reality to classroom learning. Since this "kit" was developed, a few more have shown up recently.

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Pre-History

Honolulu Community College Dinosaur Exhibit

http://www.hcc.hawaii.edu/dinos/dinos.1.html

Dinosaurs in Hawaii? Yes. This great museum exhibit has pictures of dinosaurs as well as a guided audio tour.

Archeology Resources

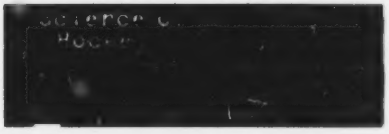
http://www.interlog.com/~jabram/elise/archmenu.htm

I find that most kids like digging around, and thus archeology can be quite fascinating. For a comprehensive listing about archeology, check out what the Royal Ontario Museum has to offer.

Sports Science

The Science of Hockey

http://www.exploratorium.edu/hockey/



The sports fans in your room might be interested in the science behind the game. Learn facts about ice, fitness, the mechanics of skating, reaction time, shooting a puck, and energy. This multimedia Web site uses video clips and interviews of scientists and San Jose Shark hockey players, all talking about their craft. There are many lessons that can be derived from this Web site.

Math

Math Online

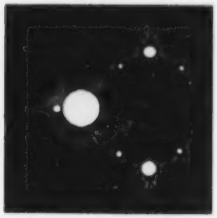
http://www.kqed.org/fromKQED/Cell/math/mathmenu.html

Sponsored by the Corporation for Public Broadcasting, this is an interesting Web site consisting of lessons, news and current

events, and related learning resources. The Web site is maintained by two teachers and they are keeping curriculum in the forefront. This is also a good place to see lessons that integrate math into every aspect of the curriculum.

Fractals

http://math.rice.edu/~lanius/frac/



Cynthia Lanius has designed a fractals unit for elementary and middle school math students that is fun and informative. Another Web site on this topic is The Fractal Microscope at **http://www.ncsa.uluc.edu/Edu/Fractal/Fractal_Home.html**. These two Web sites compliment each other well.

The Math Forum Home Page

http://forum.swarthmore.edu/index.js.html

Located at Swarthmore College, the Math Forum has a compendium of lists for students, teachers, and researchers. It also features what is new and exciting in the world of mathematics. Here you can join a Math Forum, gather valuable resources including Steve's Dump at **http://forum.swarthmore.edu/~steve/**, as well as the Forum Internet Resource Collection: Education at **http://forum.swarthmore.edu/~steve/steve/education.html**. A must see for math teachers at all grade levels. You can also "Ask Dr. Math" while you are here at **http://forum.swarthmore.edu/dr.math/drmath**.

The Math Virtual Library: General Resources

http://euclid.math.fsu.edu/Science/General.html

Here are over sixty math and science links. Some of them are good, others I would skip. Peruse the list and see which links fit your needs. This is part of a larger Virtual Library site at URL **http://www.w3.org/pub/DataSources/bySubject/Overview.html**.

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The PI Page

http://www.ccsf.caltech.edu/~roy/pi.html

Everything you ever wanted to know about Pi, including the first 50,000 digits of pi. There's even a section on the uselessness of pi.

Welcome to Mega-Math

http://www.c3.lanl.gov/mega-math/menu.html (text)
http://www.c3.lanl.gov/mega-math/index.html (image map)

The Los Alamos Lab has devised and collected Web sites that will help explain mathematical phenomena such as graphing, machines, infinity, knots, and ice cream.

Language Arts Resources

General Collections

The Children's Literature Web Guide

http://www.ucalgary.ca/~dkbrown/index.html

This excellent Web site offers all sorts of links to good children's literature. There are also links for teachers, parents, storytellers, and kids. You are bound to find something of interest to you or your students at this URL.

Electronic Resources for Youth Services

http://www.ccn.cs.dal.ca/~aa331/childlit.html

This is a literature Web site, even if the title suggests otherwise. Check out online children's books with links to the online book initiative and the Gutenberg Project. The Web page starts with a HyperText list that aims viewers to various aspects of children's literature. The only drawback to the page is its slowness. This is not a page for people in a hurry.

Fairrosa CyberLibrary

http://www.users.interport.net/~fairrosa/

This is a list of links that leads to classics, fairy and folk tales, stories and rhymes, and magazines. I've used this list to find books for several classes and have not struck out yet. A collection of Lewis Carroll works resides at this Web site.

Roget's (1911) Thesaurus

http://www2.thesaurus.com/thesaurus/

You know Roget's Thesaurus. Well, now it's online—at least the 1911 version of it is. I find this an interesting site that some of your kids might enjoy.

Specific Collections

Alan Eliason's Mark Twain Library

http://cadswes.colorado.edu/twain/

For Mark Twain lovers out there, here's a Web site you need to visit. It consists of several books, short stories and narratives written by Mark Twain, as well as memorabilia about him. The Webmaster, Alan Eliason, grudgingly read *Tom Sawyer* in junior high school and hated it, only to discover several years later that Mark Twain wrote some funny stuff. Let this be an inspiration to junior high English teachers out there; there is hope, it just takes a while to be seen.

Candlelight Stories

http://www.CandlelightStories.com/

Here is a collection of stories from all over the world. Some are old favorites and fairy tales, some have been written by kids.

Internet Public Library Story Hour

http://ipl.sils.umich.edu/youth/StoryHour/

Just a link from the larger Internet Public Library Web site, you can read some online stories and look at pictures related to the stories.

Animals, Myths and Legends

http://www.ozemail.com.au/~oban/

A collection of recently written myths and legends that look at the relationship between man, animals and the universe. I've used this Web site with several classes comparing these stories with familiar "western" stories, and to discuss the theme of harmony and living together to create a better world. The Web site is recommended for 3- to 8-year-olds, but I'm sure many people have read the legends and found them intriguing and interesting. It is a family-friendly Web site and "child safe."

Greek Mythology

http://www.intergate.net/uhtml/.jhunt/greek_myth/greek_myth.html

One of several collections of mythology on the Web. This one is a relatively comprehensive collection of Greek Myths that I have used with intermediate and middle-grade students.

Tales of Wonder: Folk and Fairy Tales from Around the World

http://it.ucdavis.edu/richard/tales/

A Web site that contains tales from Africa, Central Asia, Central Europe, China, England, India, Ireland, Japan, the Middle East, Native America, Russia, Scandinavia, Scotland and Siberia. I know of one teacher who is using this site as part of a larger unit on Vikings, but it is also a great site to compare and contrast stories from different cultures!

Cinderella Stories

http://acs6.acs.ucalgary.ca/%7Edkbrown/cinderella.html (for background info)
http://www-dept.usm.edu/~engdept/cinderella/inventory.html (for the stories)

Twelve versions of the Cinderella Story written from 1729 to 1912 are available at this Web site. Here you can compare and contrast the stories to analyze the fairy tale. There are also plans available for individual Cinderella stories as well as a fairly complete bibliography. Here's a series of lessons waiting to be taught.

Shakespeare Headquarters

http://the-tech.mit.edu/Shakespeare.html

If you are studying the Bard, you must visit this Web site just to see complete copies of his comedies, tragedies, sonnets, and poems, along with a wonderful interactive glossary. When you are reading the text and you come across a word you do not know, click on it, and the glossary will appear telling you what the word meant during Shakespeare's time.

Places to Publish Student Works

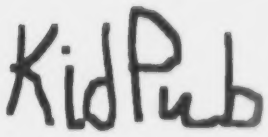
Kid's Space

http://www.kids-space.org/

"This place is rated G" according to the banner across the top of the page, and it is another place where kids can show off their writing, painting, and thinking to others. If you are looking to publish your kids' work, search no more.

KidPub WWW Publishing

http://www.kidpub.org/kidpub/



I was visitor number 469,085 . . . so it's popular. At this site kids can publish the stories they have written. Seems like a natural for many elementary classrooms that I've been in. This URL has some ideas that you might want to use.

Culture and Language Resources

The Internet is about communicating with other people. Contrary to the often heard idea that computers depersonalize learning, Internet-connected computers now do more to put learners in contact with other learners, and people with people, than any other communication medium. Help your students achieve global interpersonal dialogue by building keypal (like penpals but using a keyboard instead of a pen) relationships and also by plugging into Web sites that link them to other people and other cultures.

Human Languages Page

http://www.june29.com/HLP/

Tyler Jones is the guru of languages. He improves this page all the time. At this single URL you can find out something about almost every language spoken on earth. Check out the easy ones first, such as Spanish or French, and then try any other language you can think of—Croatian or Basque or Afrikaans—including languages that are no longer spoken, such as Middle English.

World Cultures

http://info.pps.pgh.pa.us/k12/culture.html

If you want to reach out and touch a culture, check out this site. There are links to lots of other sites dealing with the various aspects of human cultures: General World, African-American, Asian, European, Libraries and Exhibits, and The Americas. You can tour the Kremlin or Paris, go to several UNESCO heritage sites, view the symbols of Malaysia (national flag, car, etc.) or journey into China, and even more.

History and Social Science Resources

General Resources

The Washington State Social Studies Home Page

http://www.learningspace.org/socialstudies/default.html

Learning Space

At this site you can view the guidelines for social studies in Washington state, but even more important are the links to Social Studies-related resources. I especially like the link called "This month in history."

History Social Science K–12 WebPage

http://www.execpc.com/~dboals/boals.html

You were first introduced to a link from this site under General Resources (remember it included over 250 Web sites). Well, this is the home page, and it is devoted to History and Social Science. I have no idea how many links are in this compendium, suffice it to say there are scads of them. Another lifelong adventure will be just going through all the Web sites at this one URL.

Social Studies Lesson Plans for Teacher

http://www.csun.edu/%7Ehcedu013/index.html

Dr. Marty Levine has developed this site with social studies teachers in mind. It offers links to lesson plans, resources, online activities, and current events.

The Social Studies Page

http://howww.ncook.k12.il.us/docs/socstd.html

At this big site with its links to economics, geography, government, history and people, you can find the CIA Fact Book, as well as a tour of the Grand Canyon and Nepal. This Web site is updated regularly.

Teaching Material for Historians

http://grid.let.rug.nl/ahc/teaching.html

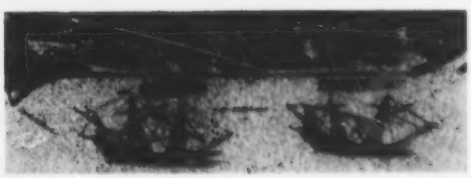
From here you can click and visit Web sites about the American Revolution, the Jewish Holocaust in Europe, Archeology, and several other subjects of historical interest. This page is part of the Web site for the Association of History and Computing at **http://grid.let.rug.nl/ahc/welcome.html**.

Specific Resources

1492 Exhibit

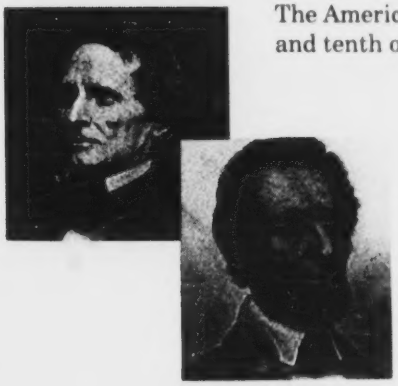
http://sunsite.unc.edu/expo/1492.exhibit/Intro.html

This Library of Congress exhibit that follows the 1492 voyage of Christopher Columbus includes maps and graphics.



American Civil War Home Page

http://funnelweb.utcc.utk.edu/~hoemann/cwarhp.html



The American Civil War is studied in the fifth, eighth and tenth or eleventh grades in most districts. Sometimes the battles are recreated, and recently dry and dusty old history lessons have come to life thanks to a PBS documentary. With timelines, maps, documents, diaries written by young and old alike, pictures, and more, this site is a special hit with middle-school teachers. But if you teach any aspect of American History, you will want to add this site to your list of bookmarks.

American Revolution to Reconstruction

http://grid.let.rug.nl/~welling/usa/revolution.html

Part of a series on American History, this is an interesting site with lots of color. I'm biased, however, because I was a history major. Since this Web site started in 1994, it has had over a million visitors!

Welcome to the Civil War Center

http://www.cwc.lsu.edu/

To compliment the American Civil War Page, you must see the Civil War Center. These folks have over a thousand links to information about one of the bloodiest wars in America's history. There are movie clips, audio and other goodies here as well.

Archiving Early America

http://earlyamerica.com/

A collection of documents from 18th century can be found at this Web site. You can also read about the lives of famous early Americans, join an online forum, and read the freedom papers. If you teach early Americana, this is the Web site you need to visit.

The Invention Dimension

http://web.mit.edu/invent/

I don't know if this is a science Web site or one for history. I do know it's interesting and kids seem to enjoy finding out about the people who invented stuff and stories behind the invention. There is a different inventor featured each week too.

MapQuest

http://www.mapquest.com/

At this Web site you can get map directions to just about anywhere in the world. I've used it with kids and I've used it to find a specific address in a specific city. This site is amazing. The kids think it's magic, and I agree with them. By the way, this Web site has the ability to locate anything . . . even your house. Big Brother is watching.

The Teaching Learning Web

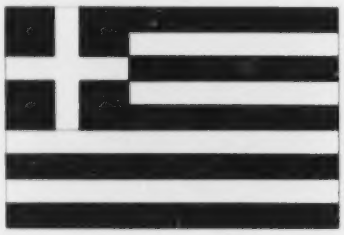
http://www.usgs.gov/education/learnweb/index.html

A set of lessons developed by the USGS (US Geological Service) that deal with global change, maps and earth science. I've used the Maps lesson several times and it is a good one!

National Flags

http://155.187.10.12/flags/nation-flags.html

If your kids are doing reports on nations around the world, then they need this site. You can get images of flags from Argentina to Zambia, and more flags are being added on a regular basis. Another related site to consider is **http://www.adfa.oz.au/CS/fig/index.html** titled "Flags."



National flag of Greece.

National Geographic Online

http://www.nationalgeographic.com/main.html

More than just an advertisement for the magazine, this Web site has resources and collections for teachers and students. Of particular interest is **http://www.nationalgeographic.com/kids** which is usually a great documentary-based page. Right now it's about pirates, but it might change.

Women in World History Curriculum by Lyn Reese

http://home.earthlink.net/~womenwhist/index.html

The well maintained Web site is full of interactive information and resources about women's experiences in world history. It is for teachers, teenagers, parents, and history buffs.

Suffrage History

http://www.pbs.org:80/onewoman/suffrage.html

Mostly text, this PBS site tells the history of women's suffrage. PBS has information and educational pages related to all of its shows at **http://www.pbs.org/**.

Museums on the Web

The Art Institute of Chicago

http://www.artic.edu/aic/firstpage.html

View some of the over 300,000 works of art in 10 different departments. The museum houses a fine collection of Japanese woodblock prints as well as the most extensive American arts collections anywhere.

Exploratorium Home Page

http://isaac.exploratorium.edu/

Visit the San Francisco Exploratorium at the Palace of Fine Arts. You can click on the World of Science and the Learning Studio to go to new worlds of information.

Metropolitan Museum of Art

http://www.metmuseum.org/

More than two million works of art reside at one the largest art museums in the world. The collection spans more than 5,000 years of world culture, from prehistory to the present.

Franklin Institute of Science Museum

http://sln.fi.edu/tfi/welcome.html

The first online museum I entered is still one of my favorites. Here you can find lessons, science demonstrations, online exhibits, and just plain fun.

Resources at the Smithsonian

http://www.si.edu/resource/start.htm

Click on Open and type in the URL above and the nation's attic will be at your fingertips.

The San Francisco Museums of Fine Arts

http://www.thinker.org

Click on ImageBase once you get to this Web site and wait for a surprise. The San Francisco Museum is committed to putting all of its collection online. Currently 50% of the collection is online and you can find out detailed information about any work of art they own. This is an amazing collection, but be warned: You are not allowed to copy any of the images for resale or publishing.

Treasures of the Czars

http://www.times.st-pete.fl.us/Treasures/Default.html

This exhibition first came to The Florida International Museum in January, 1995. It was so popular that they have kept the Web site open under an exclusive contract with the Moscow Kremlin Museums. At this site you can view Romanov artifacts.

The Louvre

http://www.louvre.fr

Maybe the most famous museum of them all. You will see exhibits change periodically. It's a busy site, so it takes awhile to access its riches, but it is worth it. Keep going back to catch up on the great Masters.

Some Hot Bookmarks

http://www.rice.edu/armadillo/Rice/Hotlinks/museums.html

Last but not least, this site has links to 37 museums on the Web.

Schools on the Web

There are lots of megapages developed by elementary, middle and high school students and/or teachers. I find these sites interesting as they give me ideas for lessons, projects, or just for developing home pages.

Vose School Educational Resources

http://www.teleport.com/~vincer/starter.html

This example of a home page designed and maintained by a school is a standard to aspire to! Vose School presents you with more resources than you will ever have time to use. Some of them are duplicates found on other lists, and some are unique to Vose. I especially like the "Kidopedia"—an encyclopedia designed by kids for kids to use and a unique idea you can use in your classroom. With screens full of information, teachers and students share with one another and with you what they are doing on the Internet. Lesson plans, work done by the kids, ideas that you can adapt for your classroom—if it works for Vose, it'll work for you. Vince Ruggiano, the Webmaster at Vose, updates the site regularly and keeps the wealth of information timely for Vose teachers and for you. There are many good examples, but I've been returning to this Web site for years and I'm always impressed with what it has to offer.

Good job, Vose School!

The American School Directory

http://www.asd.com/

If you want to find out information on just about any school in the United States, click on this address and follow the directions. You will be amazed at how many schools are connected to the Web.

Web66 International WWW School Registry

http://web66.coled.umn.edu/schools.html

Many schools that are online are listed on this Web site. After your school has made up its home page, you can add it to this site, too. It's fun to see your school listed on another Web site. In addition, you can browse the home pages out there for many good ideas about lessons and activities you can do with the Internet.

One Final Word

You have just been given the URLs to over 100 Web sites that teachers have found to be some of the best of the Web. Go ahead. Have some fun. Open these Web sites and click on the links and see all the places you can go. The Internet is the most comprehensive collection of resources you will ever have access to and it definitely belongs in your classroom *now*!

Chapter 3:

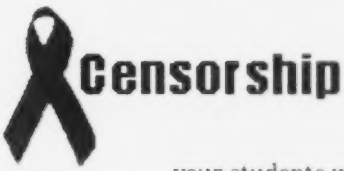
Using the Internet for Teaching— Rules for the Road

I bet you can hardly wait to get started! You know how to use a Web browser like Netscape and you've just visited over one hundred fantastic Web sites for teachers. It's just about time to get your students involved in a lesson or two. And it's just about that easy, but there are some other concerns to think about and they are the focus of this chapter: 1) censorship; 2) Acceptable Use Policies (AUPs); 3) child safety on the Internet; 4) classroom management; and, 5) lesson planning. While these are not nearly as much fun as looking at Web sites and deciding what you are going to do with them, they are needed if you want to use the Internet as an effective tool for instruction. By the way, the Internet is just one more *tool* for instruction, it is not the curriculum.

A Discussion on Censorship

Should you censor the material on the Internet that comes into your classroom, or should you let your students use their conscience as their guide? That's a question you have to answer for your own group of students. I am not in favor of censorship, but my situation is different from yours and I cannot make your decision. I can however offer the following "work arounds" that might be helpful.

The Internet is a human invention. It was developed by adults for military, academic and scientific purposes. It was never designed to be a children's playground. The Internet is the largest international storehouse of information accessed by tens of thousands of people every hour of the day and night. There are no Internet police as such, though some acts, if caught, are illegal (at least in the U.S.). Because of this, some Web sites on the Internet are not appropriate for children, or even for all adults. You can be sure that your students will find, maybe even search for, the good, the bad and the ugly on the Internet. Cyberporn, advocacy of violence, invitations to buy things that are prohibited to underage people, inappropriate e-mail invitations from people with perverted intentions for the naive and innocent—all of this and other bad stuff is mixed in together with the good stuff I showed you earlier on the Internet. Depending on what you read these days, there are "tons of smut" on the Internet, and there is no way to protect yourself or your kids—whether your own children or your students—from it. What do I think? There are over 90 million Web pages on the Internet and I believe that the good outweighs the evil. However, if you want, you can purchase or download blocking and filtering programs that censor unwanted materials.



In classrooms where teachers use the Internet all the time, they tell their students not to view objectionable sites, and they regularly monitor their students' use of the computers. To this end, many teachers have a set of "ground rules" that are posted regarding objectionable Web sites. These ground rules are similar to Acceptable Use Policies, which I'll talk about in the next paragraph. Just like we don't close libraries because there are some banned books, we do not want to stop all access to the

Internet just because some sites are questionable. It is part of our job as educators to teach young people how to cope with the unhappy realities of life. I believe that teachers and parents need to tell their kids what they ought and ought not to do and then make the consequences of violating the rules fit the behavior. That's discipline. That's education. And that is where Acceptable Use Policies become important.

As a teacher, you can do a lot to help kids cope with the bad stuff in their world, including the bad stuff that assails them on the Net. You need to encourage your students to stay on the right track, as well as to be forthright with them in discussing the dangers that lurk, have always lurked, and shall forever lurk, out there in reality. I've asked many teachers and parents what they say to their kids. The following speech is more or less the essence of what many teachers say:

"There's good stuff and bad stuff on the Internet. I give you free access to the good stuff, but I ask you to respect your fellow classmates and me and stay away from the questionable side of the Net. Please do not let me catch you surfing at restricted sites, as I will be forced to take action that will be harmful to you. If you do not understand why pornography, violence, and other abuses are bad for you, stop by my desk after class and let's talk it over."

Acceptable Use Policies

Given the above, what are some actions that you can do to make the Internet accessible while keeping your students safe when they are online. As stated above, there are concerns out in cyberspace that are x-rated or worse. While these make up about 5% of the Web sites found on the Net, your students will find them quickly. You need to discuss censorship, and you and your school need to have in place an Acceptable Use Policy and/or Student Safety Policy to help assure parents, community members and the students, that you want your students to be safe on the Information Superhighway.

Acceptable Use Policies tell all the stakeholders that you are using the Internet for educational and curricular purposes. According to CoVis at **http://www.covis.nwu.edu/AUP-archive/CoVis_AUP.html** you need an Acceptable Use Policy for the following reasons:

- AUPs educate your students and their parents about the tools and programs that will be used on the Internet and what can be expected from those tools and programs in a very general way.
- AUPs define boundaries for Internet behavior and misbehavior.
- *AUPs specify consequences that the system administrator might take in order to maintain the network. This way there are no surprises during the school year.* [1]

There are many sample AUPs on the Web. Take a look at a number of them written by other teachers in other school districts before writing one and having it approved by your school. See some of these sites for Acceptable Use Policies:

- Armadillo Acceptable Use Policies at **http://chico.rice.edu/armadillo/acceptable.html**
- Rice University gopher menu of Acceptable Use Policies at **gopher:/riceinfo.rice.edu:1170/11/More/Acceptable**
- TIES list of Acceptable Use Policies at **http://www.ties.k12.mn.us/accept/**

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[1] The Learning Through Collaborative Visualization (CoVis) Project is thousands of students, over a hundred teachers, and dozens of researchers and scientists working to improve science education in middle and high schools. They do this by approaching the learning of science more like the doing of science, and by employing a broad range of communication and collaboration technologies. Check out http://www.covis.nwu.edu/info/covis-info.html for more information.

- WEB66 Acceptable Use Policies at
  http://mustang.coled.umn.edu/Started/use/Acceptableuse.html
- Nancy Willards' K–12 Acceptable Use Policy Template at
  http://www.erehwon.com/k12aup/

From the above lists you will see many examples, but I particularly like the AUP developed by the Los Angeles Unified School District in California at **http://lausd.k12.ca.us/aup.html** which is included at the end of this chapter. You have permission to make copies of this AUP, so copy it and read what it has to say. Based on my experience from my Internet class at Indiana University and schools around the country, AUPs that are not filled with legalese seem to be easier to understand and enforce. This is one of many things to keep in mind.

Most AUPs have the following points in common: 1) Standards for security and safety; 2) Guidelines about the amount of time allowed on the Internet, who is responsible for enforcing the AUP, and Netiquette (network etiquette); 3) Consequences for misbehavior; and, 4) Consent forms to be signed by parents/guardians and the student. Recently I've seen some schools add a "non-consent" line to the form, which gives parents the option to NOT give their children the privilege of using the Internet for instructional purposes. The option of not giving consent is important too. Usually, when an Acceptable Use Policy has been signed by the parents or guardians, either with consent or non-consent, the form is kept as part of a permanent record with the rest of the child's files.

After your school committee has developed the AUP and it is approved by the board and your lawyers, inform your students, their parents and everyone else about your policies. Have your students and their parents sign the AUP and then stick to it. I know this is difficult to do, especially if one of your kids breaks the policy, but it has to be done. There is a lot of concern about kids getting into x-rated or questionable Web sites, and you need to have an AUP in place to assure parents that you are not aiding and abetting any questionable situations. I am not for censorship on the Internet as I am not for censorship of books, because, like a library, the Internet has a wealth of information meant for all

people. I am *for* teaching kids the appropriate Internet behavior they have to use in the classroom. An AUP can help enforce and regulate the expected behavior.

There is another aspect of the Los Angeles Unified School District AUP beginning to catch on with more schools. It is the taking and passing of an Internet Test and earning an Internet Driver's License (IDL). This might sound like a gimmick, but it does inform your students you are serious about enforcing the rules and regulations for accessing the Internet in your classroom.

I generally have students and parents read and sign the Acceptable Use Policy. Then I have the students take a test on the AUP. When they pass the test, they receive an Internet Driver's License which is good for a specified period of time (usually one school year). In order to log on to a computer at school, the kids must display their IDL. It's a promise from my students that they are going to follow the AUP to the best of their abilities. A sample of a generic Internet test and IDL that you may copy are at the end of this chapter.

Child Safety Online

In addition to Acceptable Use Policies, you should become familiar with filtering or blocking programs that are available to further ensure that your students drive safely along the information infobahn. You might want to think about having a parent's night at your school where the teachers can explain what is being done to protect their children from freely going to x-rated places on the Internet. As with so many other topics available on the Internet, there are Web sites devoted to child safety. One of the best Web sites is at Yahooligans! at **http://www.yahooligans.com/docs/safety** called "Staying Street Smart on the Web." Please read what it has to say about keeping your students safe when they are online.

The Direct Marketing Association has some excellent Web pages on child safety and the Internet. Go to **http://www.the-dma.org**

and click on the **Privacy** button. At this framed site you will find information about the many blocking programs available, their phone numbers and URLs in some cases, as well as scenarios you can use with your students for "what to do if" situations. They also have a 24-page booklet called "Cybersavvy" that is worth reading.

If you are using Microsoft Internet Explorer as your Web browser, you can enable a built-in parental control feature. In the pull down menus, go to View, scroll to "Options," when you see a group of file folders, click on "Security," then choose "enable ratings." You can block access based on language, nudity, sex and violence. Below is a selected list of filtering or blocking programs available and the URLs where they can be found:

- SafeSurf
  http://www.safesurf.com/
- CyberPatrol
  http://www.cyberpatrol.com/
- SurfWatch
  http://www.surfwatch.com/
- CyberSitter
  http://www.solidoak.com/
- NetNanny
  http://www.netnanny.com/
- NetRated Parental Control System
  http://www.netrated.com/

There is also a program called CyberSnoop for Windows 95/NT that keeps track of all the Web sites visited by each Internet user. CyberSnoop will also serve a blocking program letting you prevent access to objectionable Web sites or preprogramming in selected Web sites you want your students to view. To find out more information about CyberSnoop go to **http://www.pearlsw.com/csnoop/edu/descript.htm**.

You may also want to think about subscribing to an online server-based filter that ensures child safety. *Bess: The Internet Retriever for Kids, Families and Schools* at **http://bess.net** is one such provider. Subscribers dial into Bess, just as you dial into your online server now, and instead of using Netscape, you use the Bess Browser. Bess offers links to preselected Web sites plus you can block entire Web sites or individual pages within a Web site. In addition, incoming and outgoing e-mail is screened for inappropriate language. Lastly, the service is continually updated with the promise to add more than 20,000 acceptable Web sites a month. There is a monthly fee for subscribing to Bess, but a service such as this can cause peace of mind. Some teachers like it, while some teachers explain that it automatically puts up a wall of distrust. These are issues that you have to decide for your own class and school.

In addition to the above, there are also offline browsers that allow you to copy complete Web sites from the Web and use them with your students without being online at the time. For the Mac (Win/95 version is coming soon), there is WebBuddy (**http://www.datavlz.com/Products/WebBuddy/WB_Home.html**), and for both Mac and PC there is WebWhacker from Forefront Curriculum Group at **http://www.ffg.com**. With either of these programs, you can select a Web site that enhances your lesson, or copy the whole Web site including all or some of the connecting links, graphics, video, audio, etc. To use the copy, all you need is a computer with the correct browser program (these programs usually work with Netscape Navigator or Internet Explorer). You do not need to be online to view the stored site. For schools with a limited number of computers and online time, this is a perfect solution. It is also a good way to use a lesson time and again and be sure that the Web site does not change focus or URL. I have a collection of great Web sites that I have "WebWhacked" or copied that I use when I demonstrate lessons to groups of students. With an offline browser program I don't have to worry if I can get online, if a Web site is busy, or if there is questionable material on the Web site. I have control of all of those issues.

Ten Classroom Management Guidelines

When your students and their parents have signed the consent form on the AUP, and your students have passed the AUP Test, you need to give your students time to practice using the computer and the Internet. They need it as much as you did when you were first accessing the Web. This is where you have to think about managing the Internet classroom.

Listed below are a set of guidelines that I've collected from many of the 150 classrooms I've visited in the past couple of years. Some of them might be helpful to you.

1. Set aside some Internet time (or reserve the computer lab) on a regular basis so your students will have time to practice and learn. If you have a one-modem classroom, think about using the schedule below.
2. Face computer monitors so you can see the screens. When you can see what the students are doing, they are more likely to stay on task.
3. Enlarge the font size on Netscape from 12 to 24. (Go to Options in the Pull Down Menus, then General Preference, and finally Fonts, and change the size) With Internet Explorer, click on the font button until you see the largest font size available. Like #2, if you can see what your students are doing, they are more likely to do what they are supposed to do.
4. Assign students to work in groups of two or three. Small groups allow for collaboration and team work to occur; it makes for better use of your limited Internet resource; and lastly, the old saying "two heads are better than one" really works when you are teaching with the Internet.
5. Assign each computer in your room a name (or number). (I've seen computers named "Skywalker" and "Baby" as well as "Joanie" and "Scott." The kids seem to like the names and it makes identifying the computers so much easier especially if there is a problem. "Mrs. Cotton, Skywalker can't get online today, what's the matter with it?" is sometimes heard.)

6. If you have classroom computers, create an online schedule or calendar. A sample schedule for intermediate grades is on the following pages.
7. Consider turning the sound to Low or off, depending on your room size, the location of your computers, and your level of noise tolerance.
8. Make sure all of your computers have the same browser. (I know this sounds logical, but I've been in rooms that have three different browsers and that just makes your job so much harder to do.)
9. Reset the home page to one of two topics: your favorite search engine or directory (many intermediate teachers have the home page set for Yahooligans at **http://www.yahooligans.com/** while middle-school and high-school teachers have it set for AltaVista at **http://altavista.digital.com**); or to the URL you want all of your students to visit so they can start a particular lesson.
10. Ask your students to use "inch voices" when they are working online. A "3-inch voice" is one that can be heard 3 inches away; a "12-inch voice" can be heard 12 inches away; you get the idea. Whatever the case, expect some noise. Interaction is important.

Ten Lesson Planning Guidelines

As with managing your class, there are a few guidelines for planning effective Internet lessons. These too have been gleaned from many classrooms over the past couple of years.

1. Develop a rationale or purpose as to why the lesson or unit is important and why it's important to use the Internet. This is important for both your students to know and for their parents.
2. Create lessons that use a variety of resources such as (offline) books, encyclopedias, dictionaries, journals and magazines, atlases, as well as the Internet. We are preparing these students for the future where they will have to know many different ways to access information.

3. Have clear objectives for each unit of Internet-based instruction and discuss them in detail with your students prior to starting.
4. Demonstrate the lesson to your class before you send them off to work online. This will clear up any confusion that might occur, as well as reduce the amount of wasted online time that can happen when folks are not clear what they need to do.
5. Along the same lines, discuss each aspect of the lesson in detail so your students know what to expect and what they have to do in order to learn the content.
6. Have your students develop a "Web site Log" telling about the Web sites they have visited and what they learned from them. Keep your students accountable and keep them writing. Writing as well as discussing and reflecting are three keys to learning. A sample Web site Log is included at the end of this chapter. To use the Web site log, the teacher needs to bookmark or write on the board three to five Web sites that the students are to visit during an Internet session.
7. Create lessons that have a "set" at the beginning and "closure" at the end. The set creates extra interest in the lesson; the closure allows for some type of "product" to be shared with the group.
8. Bookmark three to five URLs for each lesson beforehand, so your students will have an idea of where they are expected to go on the Web.
9. Create specific worksheets or exercises for URLs to keep your students accountable.
10. Evaluation is important. Create rubrics that cover many facets of learning. Samples may be found at the end of each lesson in this book.

Summary

None of the above are easy or fun. They are all necessary. When you are using the Internet in your classroom, you are the bottom line. You want your students to learn in a safe environment. In most schools you can control that environment in many subtle ways. It is difficult to control the Internet as it is not self-contained like your school site is. It is a network of thousands of servers with millions of Web sites generated by children and adults from every corner of our world. Given that, it is not humanly possibly to control what your students have access to without some help. An Acceptable Use Policy will give you and your students guidance, blocking and filtering programs might provide some peace of mind, and solid instructional strategies in lesson planning and management will bring you one step closer into using the Internet as another instructional tool.

Copied with Permission from the Los Angeles Unified School District Information Technology Division
http://lausd.k12.ca.us/aup.html.

Acceptable Use Policy for LAUSDnet

Computers are used to support learning and to enhance instruction. Computer networks allow people to interact with many computers. The Internet, a network of networks, allows people to interact with hundreds of thousands of networks and computers. It is a general policy that all computers used through LAUSDnet are to be used in a responsible, efficient, ethical and legal manner. Failure to adhere to the policy and the guidelines for the use of LAUSDnet, as described below, will result in the revocation of access privileges. Unacceptable uses of LAUSDnet include:

- Violating the California Education Code dealing with students' rights to privacy.
- Using profanity, obscenity, or other language that may be offensive to other users.
- Reposting (forwarding) personal communication without the author's prior consent.
- Copying commercial software in violation of copyright laws.
- Using the network for financial gain, for commercial activity or for any illegal activity.

The person to whom an account is issued is responsible at all times for its proper use. LAUSDnet users should change their password frequently. Users must not give a password to another user.

Because access to the Internet provides connections to other computer systems located all over the world, users (and parents of users who are students) must understand that neither the Los Angeles Unified School District or any District staff member controls the content of the information available on these other systems. Some of the information available is controversial and, sometimes may be offensive. The Los Angeles Unified School District does not condone the use of such materials.

LAUSDnet Acceptable Use Policy rules and regulations:

- The Internet account is free to users.
- It is a privilege to receive an Internet address.
- A *responsible* user of the Internet may keep an LAUSDnet account as long as the user is a staff member or student in the Los Angeles Unified School District.

A responsible user:

- **May** use the Internet to research assigned classroom projects.
- **May** use the Internet to send electronic mail (e-mail) to other users.
- **May** use the Internet to explore other computer systems.
- **May NOT** use the Internet for any illegal purpose.
- **May NOT** use impolite or abusive language.

- **May NOT** violate the rules of common sense or etiquette.
- **May NOT** change computer files that do not belong to the user.
- **May NOT** send or receive copyrighted material without permission.
- **May NOT** share his or her password with anyone.

Note that LAUSDnet system operators will have access to all user accounts, including e-mail.

By signing on to LAUSDnet you acknowledge that you:

- Understand the rules and regulations of the LAUSDnet Acceptable Use Policy.
- Realize that, if the rules are violated, your LAUSDnet account will be canceled.
- Understand there will be no second chances.

(Note: If a student is too young to read the Acceptable Use Policy, please provide assistance. The purpose of the Acceptable Use Policy is to provide information, not to exclude anyone.)

Student Signature and Parental Consent Form

LAUSDnet (Internet) Account

Student Name: _____

School: _____ Teacher: _____

Date student completed Internet test: _____

I have read the Acceptable Use Policy. I have completed the Student Internet Test. If I follow the rules, I may keep my account on LAUSDnet. If I do not follow the rules in the Acceptable Use Policy, I understand that my network account will be taken away from me. I understand that there will be no second chances.

Student signature: _____ Date: _____

Parental Consent

I have read the LAUSDnet Acceptable Use Policy and the LAUSDnet Student Internet Test. I understand that the Internet is a worldwide group of hundreds of thousands of computer networks. I know that the Los Angeles Unified School District does not control the content of these Internet networks. When using the Internet, I realize that students may read material that I might consider controversial or offensive. The Los Angeles Unified School District has my permission to give an Internet account to my child. I understand that my child may keep this address as long as the procedures described in the Acceptable Use Policy are followed.

Parent signature: _____ Date: _____

Internet Driver's License

This license certifies that:

_____

knows the **Acceptable Use Policy** and follows the Internet guidelines for our school.

_____

Teacher Signature

Date: _____ *Exp. Date:* _____

(This license may be reduced by 50% either before or after being completed.)

Sample Two-Week Schedule for One-Modem Self-Contained Classrooms

	MON	WED	FRI	MON	WED	FRI
9:00 - 9:45	Group 1	Group 5	Group 1	Group 5	Group 1	Group 5
10:00 - 10:45	Group 2	Group 6	Group 2	Group 6	Group 2	Group 6
11:00 - 11:45	Group 3	Group 7	Group 3	Group 7	Group 3	Group 7
1:00 - 1:45	Group 4	Group 8	Group 4	Group 8	Group 4	Group 8

This schedule allows for a group of students (usually no more than 4) to work on one online computer for about 45 minutes, 2 days a week. When this schedule is published ahead of time, there seems to be little or no confusion.

Sample Schedule for Self-Contained Classrooms with 4 Online Connections

	COMPUTER 1	COMPUTER 2	COMPUTER 3	COMPUTER 4
9:00 - 9:45	Group 1	Group 2	Group 3	Group 4
10:00 - 10:45	Group 5	Group 6	Group 7	Group 8
11:00 - 11:45	Group 9	Group 10	Group 11	Group 12

If you have four computers that can be online at the same time, it pays to have smaller groups of students and more groups. This schedule is set up for 45-minute work sessions. The student groups are small, this time, only two or three per group. With four computers online at the same time, there will need to be a set of "ground rules" decided upon by the teacher and / or students as to behavior, etiquette, etc. The students can work as many days online as possible. If the computers are in your classroom, I recommend going online at least three times a week. This gives the students needed practice.

When I'm first working with students on the Internet, I assign groups. As I get to know what each student can do, I then let the students self-assign. Self-assignment into groups is a privilege, not a right, and I let my students know that.

BEST COPY AVAILABLE

Student Internet Test

Name: _____ Date: _____

True or False (circle the correct answer)

1. It is OK to share your password with your friends. T or F
2. Copyrighted material may be downloaded from the Internet as long as it is cited properly. T or F
3. A student or teacher may not use the Internet to sell anything. T or F
4. It is all right to swear or verbally abuse anyone using e-mail. T or F
5. You should delete files, including old e-mail messages, from your account to save space on the computer. T or F
6. You should use the Internet as a tool for learning. T or F
7. Using the Internet is a privilege, not a right, and inappropriate use will result in cancellation of that privilege. T or F

Multiple Choice: (circle the correct answer)

8. If you think that someone is using your password,
   a) change your password
   b) notify the teacher or network administrator
   c) don't worry about it
   d) both a) and b)

9. When using e-mail, you
   a) may send letters to anyone and say anything
   b) may send e-mail for fun to anyone
   c) never know who is reading your mail
   d) must remember the Acceptable Use Policy
   e) both c) and d)

10. If you need help,
    a) ask the network operator or your teacher
    b) look for help on the Internet
    c) experiment
    d) all of the above
    e) none of the above

11. When you and your parents/guardians signed the AUP you agreed to:
    a) use the Internet for instructional purposes
    b) stay away from objectionable Web sites
    c) not download programs
    d) not waste time playing games on the computer
    e) all of the above

On the back of this page, in your own words write a summary of our Acceptable Use Policy.

Modified from the Los Angeles Unified School District Acceptable Use Policy at http://lausd.k12.ca.us/aup.html.

Web Site Log

Group Name: _____ Date: _____

Members: _____ _____

_____ _____

1. Copy the Web sites from the bookmark list (or the board) that deal with your topic:

http:// _____ Title: _____

http:// _____ Title: _____

http:// _____ Title: _____

http:// _____ Title: _____

http:// _____ Title: _____

2. Visit a Web site, and write its title: _____

_____

3. What was the main idea of the Web site? _____

_____

4. What are the four most important points of the Web site?

a) _____

b) _____

c) _____

d) _____

5. How are you going to use this information in your report?

_____

_____

_____

6. Repeat this procedure for three to five Web sites on your topic.

Chapter 4:

Searching on the Web—Directories and Search Engines

You have worked with your browser on the Internet, and you've had a chance to look at some of the Web sites listed, and you are having fun! It *is* fun! But you might be wondering how you find a particular piece of information when there is not a convenient URL to follow? Good question. That, by the way, is the topic of this chapter. You will learn how to search the Web using directories and search engines.

Remember that old saying "Give a person a fish, feed him for a day; teach a person to fish, feed him for a lifetime"? The Web sites in Chapter 2 were the fish, and while those "fish" will keep you busy for quite a few days, they did not teach you how to fish. So let's learn how to "fish the Web."

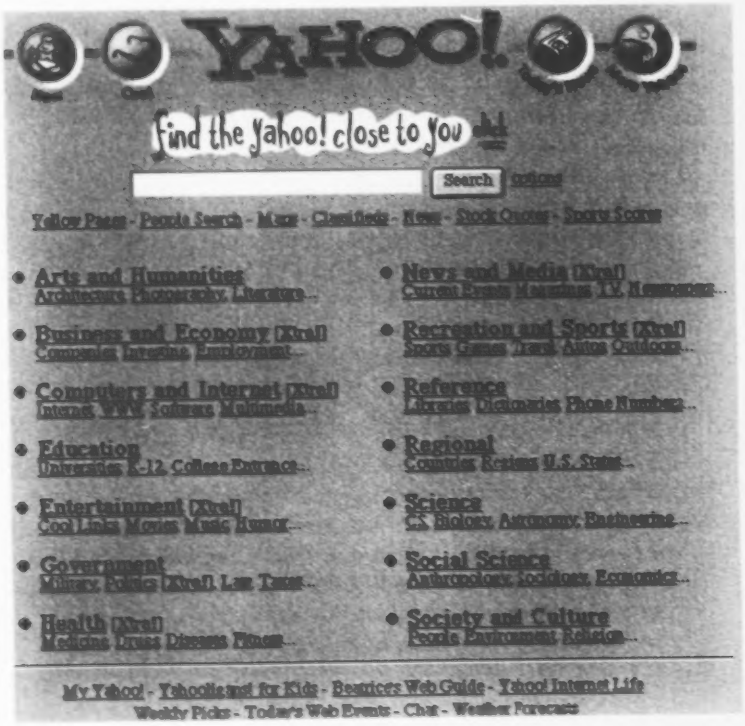
Two Main Ways to Find Information on the Web

The Web is vast and growing more vast every day. Fortunately, there are a couple of ways to help you find the information you want, just as card catalogs do this incredible function in libraries. There are two types of Web sites that function as "card catalogs" on the Internet. You can search by categories or by specific topics. A categorical search is called a "directory" and a specific topic search is called a "search" or "search engine." Fortunately most search services allow you to do both categorical searches and keyword searches, so you need to know how to do both. Both are easy to use and both will provide you with the same type of information (although frequently not exactly the same information). If this sounds confusing, think about your phone book and its two sections: the white pages and the yellow pages. In the white pages you find specific information about people. In the yellow pages you find categorical information about types of businesses. Yet from both, you find out phone numbers and addresses. A search engine is similar to the white pages in the phone book and a search directory is like the yellow pages. As with the phone book, each has their use and each are needed at various times.

Search services exist on the Web as full-fledged Web sites. They have URLs like every other Web site listed in this book. You can get to a directory and search engine in the same way you get to any Web site. Click on Open or the Open File icon in your browser, type in the URL, and hit return or OK. That's the easy part.

I think the best way to learn about search services is to study one directory and one search engine so you can see for yourself. (Remember, most search services will allow you to do both a directory/categorical search as well as a specific/keyword search.) The directory I have chosen is "Yahoo" at URL **http://www.yahoo.com/** and the search engine I have chosen is AltaVista at URL **http://altavista.digital.com/**. I chose Yahoo because it is the largest, oldest and most used directory on the Internet. I chose the AltaVista search engine because it returns a lot of information in an easy-to-read format. I believe they are good examples of each type of search device. Both of these sites

are commercial ventures, so you will see advertising. In fact advertising is what pays for their development.


YAHOO!
Find the yahoo! close to you
Search
options
Yellow Pages - People Search - Maps - Classifieds - News - Stock Quotes - Sports Scores
Arts and Humanities
Architecture, Photography, Literature...
Business and Economy [Xtra!]
Companies, Investing, Employment...
Computers and Internet [Xtra!]
Internet, WWW, Software, Multimedia...
Education
Universities, K-12, College Entrance...
Entertainment [Xtra!]
Cool Links, Movies, Music, Humor...
Government
Military, Politics [Xtra!], Law, Taxes...
Health [Xtra!]
Medicine, Drugs, Diseases, Fitness...
News and Media [Xtra!]
Current Events, Magazines, TV, Newspapers...
Recreation and Sports [Xtra!]
Sports, Games, Travel, Autos, Outdoors...
Reference
Libraries, Dictionaries, Phone Numbers...
Regional
Countries, Regions, U.S. States...
Science
CS, Biology, Astronomy, Engineering...
Social Science
Anthropology, Sociology, Economics...
Society and Culture
People, Environment, Religion...
My Yahoo! - Yahooligans! for Kids - Beatnik's Web Guide - Yahoo! Internet Life
Weekly Picks - Today's Web Events - Chat - Weather Forecasts

The Yahoo Web page shown above has some cute graphics that link to "new," "cool," "today's news," and "more Yahoos." Then comes the advertisement. Below that is a box with a search button next to it, and following that are a list of links to other Yahoo features: Yellow Pages, People Search, Maps, Classifieds, News, Stock Quotes, and Sports Scores. If you click on any of these words or buttons, you will be transported to those sections of the Yahoo Directory. The screen then becomes divided into two columns of words, called categories. In each category there are subcategories. There are fourteen major categories of information you can search through. Let's try looking up a friends' phone number. Scroll to "Reference" and click on the subcategory of

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"phone numbers." This will take you to a second screen and you have to make a decision what subcategory to choose. Since you are looking for an individual, click on that link. This will take you to a third screen where you are given still more choices. Scroll down the list until you find the link called "American Directory Assistance." It is described as having names and phone numbers from all over the United States. Click on it and you will get yet another screen where you can type in the name of your friend. If your friend is listed in that directory, his or her name and number will appear soon.

Let's try this again. Say you are seeking information about Frank Lloyd Wright. You know he was a famous architect, so you click on Architecture (under the Art and Humanities category) and soon another screen appears that lists topics about architecture and one of the links says "architects" and it has a number after it. This number indicates that Yahoo has information about that many different Web sites about architects. This will bring you to a third screen where you can narrow down your selection some more. Here there is a link to "masters." Since Frank Lloyd Wright was a master architect, this is a good selection. Scroll down the page of masters and you will see a link to Frank Lloyd Wright also with a number after it. Click on that link and you find yet another page devoted to Frank Lloyd Wright and some of his masterpieces. Each link that has a number after it indicates that more screens of information are available. Links that end with an "@" indicate that the heading is listed in multiple places within the Yahoo hierarchy. If you click on that link, it will take you to a different subcategory within Yahoo.

As you can see, a search using a directory requires that you have background knowledge, logical deduction, and plenty of time, because you have to think of broad categories and narrow them down to pinpoint your topic over a period of several different screens. If you do not have the background information, you can sidestep the categories by typing in the Search box at the beginning of the Yahoo screen. This will then search the Yahoo directory for links on that specific topic (it will not search the whole Web, only the database that Yahoo has compiled). It is usually a slow search as this directory is truly set up for you to search the hierarchical categories and not look for specifics. Remember, this is the "yellow pages" type of search you can do on the Internet.

A search engine looks for URLs using another process. The AltaVista Web site is below. It has a pretty logo, the obligatory advertisement, and a larger box with two small pull-down boxes

and a larger fill-in box in it. One little box asks if you want to search "The Web" or "Usenet" (newsgroups) and the other little box asks for the language you want. The defaults are set for "The Web" and "any language." Set up the screen so it suits your needs. Below those two little boxes is a larger write-in box where you can type in your topic or keyword. You will be doing a "keyword search" like you do when using a library's online card catalog. After you type in your keyword or phrase, click on search or hit the return button on your keyboard, and AltaVista will find URLs that have your keyword included anywhere within a Web page in its database. This means you will get a lot of information back. After you have received a *long* list of potential URLs, you can narrow them down by clicking the Refine button in the search box. This will give you a screen that has a categorical list of topics or a graph of topics that are related to your keyword search. At this point you might wish to exclude topics that are not relevant.

Let's try the two searches we did in Yahoo to compare and contrast a directory with a search engine. Using the AltaVista search

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engine, to find your friend's phone number in Anytown, type in "Anytown Telephone Book." Soon a list that has over 200,000 possible hits appears. Scroll down the list and see if any look relevant. Not too many do. Since the list is too large and random, return to the search box and click on the "Refine" button. Here you can refine your search to Anytown and Telephone only. Search again, and the list will decrease to about 250. This is still a lot, but far less to wade through than before. In fact, if you do this search, you will probably never find the telephone book. This is the reason there are directories.

Now let's redo the search for Frank Lloyd Wright. Type in Frank Lloyd Wright, and you will get over 230,000 possible hits. At this point you can scroll down the list and see if there are any relevant hits, or you can refine your search. However, as you scroll down, you see that many of the titles look relevant, so you can click on links that seem pertinent to your study. You can also "refine" your search as you did above, narrowing it down to include only the exact words you are seeking. In this case they would be "Frank," "Lloyd," and "Wright." If you do this, the list is reduced to about 21,000 possible hits. The first few that appear on the screen seem to be on the appropriate topic. Click on one of them and you'll probably find the information you are seeking. For topics that naturally fall into categories, a directory search works well. For topics where you know the essential keyword, a search engine is useful. In either a directory or a search engine, you need to practice logical, problem-solving thinking processes and that is what makes these such useful teaching tools.

You now have some actual practice doing a search. You've compared a directory search to a search engine search. In either case, you have to use some logic—or that uncommon quality called "common sense." Also, if you look at the two sets of lists, you might notice there is some overlap. That's good. It says you are on the right track. If I don't get any overlap, I wonder if I have done the search correctly. You might want to practice some more, search for a topic like Dinosaurs or Volcanoes or Native American Legends and see what happens using both search methods.

On another note, think about search engines and directories from another angle. A directory has Web sites in categories, therefore

someone had to actually view the Web site and put in a category. Therefore, all Web sites listed in a directory have been screened by someone. A search engine does not have any type of human screening at all. It is a computer-based system that relies on word matches. If the word "frank" appears in a document and you are searching for "Frank Lloyd Wright," it is considered a hit. That is why search engines deliver many more hits than directories.

What to Use

The things I look for in a search service are *speed* and *accuracy*. I'm not the most patient person in the world, so I like the speedier engines better than the sluggish ones. However, some of the speediest ones also produce a lot of information that is not accurate for my search. Search engines look for matches to a keyword. When we typed Frank Lloyd Wright, we got 230,000+ hits. Are there over 230,000 Web sites out there that mention Frank Lloyd Wright? Or do some have Web sites mention Lloyd Wright or Frank Lloyd or Frank Wright or Wright Frank or just frank speaking . . . you get the idea. There is something called the "noise-to-hit ratio" and some search engines are "noisier" than others. The "noise-to-hit ratio" depends on how the search engines collect their databases. Some search engines have a database collection that only includes words found in the "headers" and "titles" of an HTML page. These are narrow databases and produce a high-hit, low-noise ratio. Other search engine collect the first one hundred words found on an HTML page. These search engines are a bit broader, and also produce a high-hit, low-noise ratio. However, the AltaVista database collects every word found on the HTML page. This makes it a low-hit, high-noise search engine. It is, however, one of the faster search engines. You have to decide which is best. For that reason, I like to use a couple of different search engines and compare their list of hits.

Now that you've had a little taste of both a directory and a search engine, you need to decide which is best to use for the type of search you are doing. Let me offer you a few advantages and disadvantages for both. Then you can make the decision whether to choose the *directory* section or the *search* section.

Pros and Cons of Directories

Directories are good browsing devices. Use the categories as a tool to guide you to material you might not find any other way. They are orderly, moving from general information to specific information about a topic. Also, a directory is made by real people who have reviewed the Web sites and have used some sort of selection process. For this reason, directories are good starting places to find out more about a topic. However, if you are looking for a history topic, do you search in Art and Humanities or Social Science? Both categories are present and history can fit in either one of them. I especially like to use directories at schools because they help reinforce deductive reasoning.

There are, however, disadvantages to them. If you don't know the category to start with, you might never find your information. If you can't figure out a specific category, then use the search mode provided. Another disadvantage is the size limit of the database. Since people have to read and categorize Web sites, some URLs might be excluded because they have not been reviewed yet. New URLs are constantly being added to the Internet and it is next to impossible for reviewers to screen, categorize and cross-reference every URL on a daily basis.

Pros and Cons for Search Engines

When you know a keyword or phrase, or a specific name for what you are looking, a search engine is an efficient way to find information. In the Frank Lloyd Wright search, we were led directly to a list that in the end could contain 230,000+ hits. That's impressive. You have many choices and some are bound to be relevant. You just have to wade through them.

However, there is a drawback. You need to know a keyword or phrase, and you have to be willing to go through many links that might not be relevant to your needs.

Take your pick: directories for categorical searches, search engines for keyword searches. Depending on your needs, both can provide you with lots of information.

Other Web sites for Searching the Internet

There are many different search devices on the Internet. If you are using Netscape, click on NetSearch and you will see the impressive list that the Netscape Corporation has developed. You can also search for "search engines" using Yahoo or AltaVista. However, to save you some time, I've listed a few directories and search engines below. Go to them and bookmark the ones you think you will use the most. Most search devices will have a "Help" link or button. Usually this button will give you some vital clues about how to use that search device even better.

Search Service	URL
A2Z	**http://a2z.lycos.com/**
AltaVista	**http://altavista.digital.com/**
Excite!	**http://www.excite.com/**
HotBot	**http://www.hotbot.com/**
InfoSeek	**http://www.infoseek.com**
Lycos	**http://www.lycos.com/**
Magellan	**http://www.mckinley.com/**
MetaCrawler	**http://www.metacrawler.com/**
Search Com	**http://www.search.com**
Starting Point	**http://www.stpt.com/**
WebCrawler	**http://www.webcrawler.com**
Yahoo	**http://www.yahoo.com/**
Yahooligans	**http://www.yahooligans.com/**

My favorite directories are Yahoo, Magellan, and Yahooligans! Yahooligans! is made by the folks at Yahoo, and it is designed for children aged seven to twelve. Many teachers like Yahooligans because it guarantees that the first link will be child safe. My favorite search engines are WebCrawler, InfoSeek, and AltaVista. To save time, you can use Search.com which allows you to choose from seven search engines on one page. I recommend that you learn how to use one directory and one search engine. Use it often and get lots of practice. Then if you want, branch out to others.

Boolean Searches

There's one more thing to know: How to do a Boolean search. Some, not all, of the search engines listed will let you do Boolean keyword searches. I remember the first time I heard the word Boolean. It was during my MA stats class, and I dreaded the thought of the whole thing. Well, seeing it on a search engine started the old fear again. Don't let it happen to you! I finally have Boolean searches down cold! And they are not even hard. Just put it down as one more thing you have to know to do a good search . . . and it's one more thing you can teach your kids. They'll thank you for it later.

Boolean searches rely on "words" called operators: and, or, not, near, adjacent, " . . . " and (. . .). That's all. If you open WebCrawler at **http://www.webcrawler.com/WebCrawler/Help/Advanced.html**, you will see a clear explanation of each of these operators. I'll paraphrase the WebCrawler explanation for you here. Say I want to find Web sites about the History of China. If the search engine I am using requires Boolean operators, then I have the choices listed below:

Operator	Example	What you'll get back	Result
AND	China AND History	Web sites that include both of the words—e.g. Web sites with both China AND History	AND will limit your search
OR	China OR History	Web sites that include either of the words or both—e.g. sites with China OR those with History OR those with both China and History.	OR will broaden your search
NOT	China NOT Pottery	Web sites that include the first word or phrase but not the second—e.g. sites with China NOT pottery (the dishes).	NOT will limit your search
"..." (quotation marks)	"Chinese History"	Web sites that include the phrase as it is written	"..." will limit your search

NEAR	China NEAR 25 History	Web sites that have China and History written within 25 words of each other	NEAR will limit your search
ADJ (adjacent)	China ADJ History	Web sites that have the two words written next to each other i.e., China History	ADJ will limit your search
(. . .)	China NOT (pottery OR porcelain)	Web sites containing the first word but not the others	(. . .) will limit your search

Boolean searches should be easy, but there is always a fly in the ointment. Some search engines, like WebCrawler use "or" as the default operator; other search engines use "and" as the default operator. Some don't use either. Then there is just one more little problem. Not all of them use the same operators. Some use colons (:) and commas (,) where others use +, - and \. When you are not sure what operators a particular search engine uses, read the help section on the home page of the search device or look for a link that indicates how you can improve your search results. Most search engines have a built-in Help! function or a Frequently Asked Questions (FAQ) section that will give you information about how to develop a "good search." If the search engine uses a Boolean search pattern, follow the directions and use the correct operators for that search engine. When you know the right words to use for each engine, you will be rewarded with better results.

Scavenger Hunt, Anyone?

You now have had a good introduction to search devices found on the Web. You know that directories are categorical and search engines rely on keywords. You know that there are few pure directories or search engines, as most search devices offer both types of searches. You know a little bit about Boolean searches, and you have URLs for search devices. From what you have just learned, choose a directory and a search engine from the list and see if you can find the following items. This exercise is something you might want to do with your kids, too. It helps teach logic

skills as well as develop a sense of how things are organized on the Web and how interconnected they all are.

The rationale for this type of lesson is simple. If you are going to be using the Internet, you need to know how to gain access to information. Just like guide words are necessary for learning how to use a phone book or dictionary, directories and search engines are necessary to learn how to find information on the Internet.

The procedure is easy. Introduce your students to a directory and a search engine. Tell them about Boolean operators. Walk them through a couple of examples. Then give them a list of things they have to find. Evaluation is almost self-explanatory. If they find Web sites that match the hunt items, they are successful. At the end of this chapter is a middle-grades level worksheet I have used. You can copy it or you make up your own scavenger hunt. The answers are below.

Answers:

1. **92**.
   I used WebCrawler and typed in Periodic Table of Elements.
   See **http://www.cs.ubc.ca/elements/periodic-table**.

2. **4808 Hollywood Blvd., Los Angeles, CA**.
   I used Yahoo, because I knew that Frank Lloyd Wright designed the house.
   See **http://www.westworld.com/~fohh/map.html**.

3. **False: *Robinson Crusoe* was written in 1721**.
   See **http://www.brunel.co.uk/davidw/_SIXTEEN.html#3**.

   ***Alice in Wonderland* was written in 1865**.
   See **http://www.germany.eu.net/books/carroll/alice.html**.

4. **Hafa Adai**.
   I used Yahoo to search for Guam, then followed the listings.
   See **http://www.gov.gu/index.html**.

5. **1877–1881.**
   I cheated. I knew that the White House home page had a listing of presidents, so I went there first—**http://www.whitehouse.gov/WH/glimpse/presidents/html/rh19-plain.html**. You can also get there with Yahoo, Government, then Presidents, which will eventually lead you to **http://www.groller.com/presidents/cards/front/19chaye.html**.

The American Presidency

You can make a Scavenger Hunt as easy or hard as you wish. You can search for answers that jump out at you or for embedded answers that your kids will have to read a bit before they know they are on the right track. You can develop hunts for people, places, and things on the Web as easily as you can develop hunts for ideas, facts, and opinions. You can develop hunts to introduce a topic to your students, or you can develop hunts that offer them practice with logic in several different topics. Don't forget to look at the skills your kids are using and learning. They are learning how to skim and scan a Web site for information which reinforces their reading skills. They are learning how to sort or categorize information, use higher-order thinking skills, reinforce writing and typing skills, and the list goes on. As you can see, the Internet is a teaching tool.

I hope you had fun learning how to search the Internet. I hate to tell you this, but we have just skimmed the surface of searching the Net, but this is enough for now. I really hope you develop a couple of scavenger hunts for your kids to do. If you have a super successful one, e-mail it to me and I'll include in on the Web site for this book (**http://www.csuchico.edu/educ/3toc.index.html**). You can always reach me at **cotton@instruction.com**. I'm looking forward to hearing from you soon!

Scavenger Hunt

Name: _____ Date: _____

1. **What is the atomic number of uranium?**

   The answer: _____

   URL where you found the answer: _____

2. **Where is Hollyhock House located?**

   The answer: _____

   URL where you found the answer: _____

3. **True or False: *Robinson Crusoe* and *Alice in Wonderland* were written in the same year? (Please write the year each was written.)**

   The answer: _____

   URL where you found the answer: _____

4. **If you want to say "hello" to Chamorro-speaking folks on Guam, what word or phrase would you use?**

   The answer: _____

   URL where you found the answer: _____

5. **When was Rutherford B. Hayes President of the United States?**

   The answer: _____

   URL where you found the answer: _____

Chapter 5:

Developing and Designing a Web Site

Now that you've seen many Web pages, you are probably thinking you might want to make one up on your own. You can! In fact, you and your students can learn to use HTML (HyperText Mark-up Language) so that you can publish your own individual home pages, or even develop a Web site for your class and school. It's not really a programming language, it is just a set of typesetting style codes, so don't let that scare you away. It's easy, and some would say fun!

All you need to get started is a list of the HTML codes and any word processor or text editor. HTML uses codes called tags, which are just letters, words, numbers or phrases, that tell your Web browser how to display a Web page. The tags are placed inside of the text of a document to mark where pictures, graphics, other links or type sizes should be placed on the browser screen. Here's a sample of HTML code: **<H1>**The Online Classroom**</H1>**. If you type that code using your word processor and save it to a text file named <toc.html> and open the file on Netscape, you will see

The Online Classroom

written in large type.

HTML is primarily a bookend code. If you want your books to stand up on the shelf, you need a bookend at the left and right ends of the row of books. The same idea follows with HTML: You need a tag at the beginning and end of every string of code. Angled brackets **< >** at the beginning say, "Code starts here." Angled brackets with a forward slash **</ >** says, "Code ends here." For example, the tag **<B>** causes text to be presented in bold letters. "B" for "bold" inside the angled brackets indicates an HTML coded command: "This is a code command: Turn on B for Bold!" When you get to the end of the word or phrase, you key in **</B>** which tells the machine: "This is a code command: Turn off B for Bold!" Try it. Type the same phrase as above, but make it bold: **<H1><B>**The Online Classroom**</B></H1>** and see what happens. It should look like this:

The Online Classroom

HTML consists of many such tags: tags for headlines, tags for underlining, tags for italics, tags for titles, and tags for paragraph breaks, but don't be overwhelmed by all the tags! Most of the tags are alliterative, such as "B for bold" or "I for italics." After you've coded your first few Web pages, you will soon remember most of the commonly used tags. Many browsers support tags that allow you to set up tables, customize backgrounds, or add color and graphics, but the problem with HTML is that it is a simple formatting language, not too complex. If you're accustomed to setting type and using complex desktop publishing programs, you will find HTML and its quite limited range of typographic possibilities rather clunky.

One of the best ways to start setting up a home page is to consult the many online pages developed as teaching tools for folks like you on how to do it. Search Yahoo for "HTML" and you will find hundreds of Web sites are out there; many of them are very helpful. You can also buy an HTML guidebook in a bookstore or borrow one from the library. Just be sure you get a recent edition, as HTML changes and grows every year. Listed on the next page are a few beginning HTML sites you might want to visit.

HTML Site	URL
123 . . . Easy	**http://spring-board.com/123easy/map.html**
A List of HTML Tags	**http://www.cosy.sbg.ac.at/~lendl/tags.html**
Creating Net Sites	**http://home.netscape.com/assist/net_sites/index.html**
Do It Yourself HTML Down and Dirty Handbook)	**http://metro.turnpike.net/D/DanMM/howhtm1.htm**
HTML Tutorial—An Overview	**http://www-pcd.stanford.edu/mogens/intro tutorial.html**
The BareBones Guide to HTML	**http://www.werbach.com/barebones/**
The Web Designer (a directory of links to every aspect of HTML and Web design)	**http://web.canlink.com/webdesign/**

To see what a Web page looks like without the window dressing, that is in "bare" HTML, you can tell your browser to show you the document source code. In Netscape, go to the View pull-down menu and scroll down until you see "Document Source" and click on it. In the PC environment you will immediately see both the tags and text that were used to make that Web page look as it does. In the Mac environment, your browser may launch an

external program to show you the codes. In both cases, you will see lines of text that start and end with <bracketed letters, words and numbers> and in between is something that looks like English. These <bracketed words> are the tags that have been "embedded" into the text; they are not seen when the page is displayed normally. If you have already coded a home page, the tags and text you see will have meaning to you; however, if you have only looked at browser screens and never delved any deeper into the medium, reading tags is like reading a foreign language. But, don't let the techie jargon scare you into thinking that you cannot design and develop your own home page! If you have walked the Web only a little bit—especially in regions where educators roam—you will have seen Web pages written by elementary-school kids. If kids can do it, you can do it! You do not need to be a computer programmer to develop a Web page; you need only to know what you want your Web page to say, time to hunt and peck, and patience.

This chapter tells you everything you need to know to make an adequate start. And if you get stuck, have the students in your class help you out. If you are completely baffled, there are even Web sites on the Internet that will put your information in code for you. It will take a couple of days for you to get the return copy, but if you are interested, check out **http://www.wizard.com/~fifi/pagemake.html**.

HTML Basics

The Web page or document you want to code has four sections: Document Type, Header, Title, and Body. The document type is **<HTML>** and is placed at the beginning of the document or file. At the very end of the document or file, you write **</HTML>** as a finishing touch. The first and last bookend.

The Title is the name of the document as it is going to show up on the top center of the browser window, right after it says Netscape or Internet Explorer. It is written **<TITLE>** and at the end of the

title, **</TITLE>**. The header **<HEAD>** is the area in the document where the title is placed, and it ends with **</HEAD>**. Lastly comes the Body of the file or document, the bulk of the page. It is coded **<BODY>** and **</BODY>**.

Explanation	Code	Where to put it
Document Type	**<HTML> </HTML>**	beginning and end of file
Header	**<HEAD> </HEAD>**	descriptive information such as the title
Title	**<TITLE> </TITLE>**	must be within <HEAD>
Body	**<BODY> </BODY>**	the majority of the document or file

Here's an example:

```
<HTML>
<HEAD>HEADER
  <TITLE>What's It All About, Anyway?</TITLE>
</HEAD>

<BODY>BODY
</BODY>
</HTML>
```

HTML is not case sensitive. You may use uppercase or lowercase letters when you are composing tags (although I suggest being consistent). What you must not do is forget the **<brackets>** or / marks. If even one **>** mark is left off, the tag will not be read correctly, and the document will not appear as you want it to appear. Remember, though, that URLs are case-sensitive; using a capital letter instead of a lowercase letter can break a link.

Sample HTML

The phrase "The Information Superhighway" is coded several different ways below. Look at the tags, and see how the printed result changes.

Command	Coding	Result
Bold	**<B>**The Information Superhighway**</B>**	**The Information Superhighway**
Italics	**<I>**The Information Superhighway**</I>**	*The Information Superhighway*
Bold, Italics (together)	**<I><B>**The Information Superhighway**</B></I>**	***The Information Superhighway***
Centered	**<CENTER>**The Information Superhighway**</CENTER>**	The Information Superhighway

If you get the general idea, then you are ready for some more complicated coding. Use **
** (line break) at the end of a line when you want a single carriage return. Use **<P>** when you want a double carriage return at the end of a paragraph and use **<HR>** to put in a horizontal rule or line across a document. These are three tags or codes that do not need the **</>** tag or the other bookend. Here are some examples.

Code	What You Write	Result
Line break or single carriage return	She likes to sing.** ** He likes to dance.** **	She likes to sing. He likes to dance.
Double carriage return or paragraph	She likes to sing.**<P>** He likes to dance.**<P>**	She likes to sing. He likes to dance.
Horizontal Rule	**<HR>**	----------

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To make lists, use either **<UL></UL>** (unordered list) or **<OL></OL>** (ordered list) tags along with **<LI>** (link) tag. An Unordered list is not numbered, while an ordered list is numbered 1, 2, 3, etc. Here's an example using the **<HR>**, **
, **<UL> and **<P>** tags:

HTML Code	**What appears on the browser window**
<HR><P>	_____
We saw these animals:	
<UL>	We saw these animals:
<LI>goats	• goats
<LI>pigs	• pigs
<LI>cows	• cows
</UL><P>	
<HR>	_____

Here's the same example using a numbered list:

HTML Code	**What appears on the browser window**
<HR><P>	_____
We saw these animals:	We saw these animals:
<OL>	1. goats
<LI>goats	2. pigs
<LI>pigs	3. cows
<LI>cows	
</OL><P>	_____
<HR>	

There's more. You want to connect your page to other pages, so you need to create hypertext links. Those are the underlined words you see on Web pages that allow you to bounce from one page to another. There is a specific coding for them, too. Every time you want to create a link, you must *anchor* it in the main body of the text. Since "anchor" starts with "**A**" the tag starts out with an "**<A HREF=**" and a twist. Next, you want to refer to the other Web site. All Web sites are identified by Uniform Resource

Locators, so you type in the URL. Here is a sample that will take a visitor to the Smithsonian Institution.

```
<A HREF="http://www.si.edu/resource/start.htm">The Smithsonian
Institution</A>
```

If you typed this in on a HTML document, it would look something like the following on a browser screen (you'll have to imagine that it is in blue type):

The Smithsonian Institution

and, if it was coded correctly, by clicking on the underlined phrase, your visitor will be viewing the home page for the Smithsonian Institution in Washington, D.C. The hypertext link is relatively easy to remember if you know what the various parts represent. The chart below explains what they mean.

HTML Code	What it means
<A	The opening anchor.
HREF=	The hypertext reference.
"http://www.si.edu/resource/start.htm"	The URL for the new document. Don't forget the quotation marks at the beginning and end of the URL.
>	End of the opening anchor
Smithsonian Institution	Underlined hypertext link the browser screen will show.
</A>	Ending anchor.

The code to insert images in your pages is similar to the code that commands a link to be inserted. Online images are not actually part of the .html file, but are links to separate image files. Instead of inserting a document that has ".html" at the end of the URL, it

will have the abbreviation for the type of graphics file it is. Some of these abbreviations are ".gif," ".jpg", ".mpg." Almost all Web browsers will have image reading programs that support the types of image files mentioned above. So, if you are going to put in an image, you will write the following tag:

```
<img src="egc.gif">
```

Can you decode that tag?

HTML Code	What it means
<img src=	The opening tag telling the browser to view an image
"egc.gif"	title of the image file
>	end of the tag

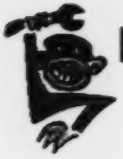
Notice that the URL used in this example is very short and does not begin with "http://." This is called "relative addressing" and it only works if the files are in the same folder as the Web site.

Headers

The type sizes and font styles are limited in HTML, so you'll have to be clever in their use to give your home page its own special look. The six type sizes available for headings and subheads in HTML, range from **<H1>**, the largest, to **<H6>**, the smallest:

HTML Code	What appears in the browser window
<H1>MAIN TITLE**</H1>**	MAIN TITLE
<H2>SMALL TITLE**</H2>**	SMALL TITLE
<H3>SUB-HEAD**</H3>**	SUB-HEAD
<H4>SUB-SUB-HEAD**</H4>**	SUB-SUB-HEAD
<H5>SUB-SUB-SUB-HEAD**</H5>**	SUB-SUB-SUB-HEAD
<H6>THE SMALL PRINT**</H6>**	THE SMALL PRINT

Be forewarned that some browsers cannot read **<H5>** or **<H6>** because they are too small. Netscape, however, can read them.



HTML Reference
Cheat Sheet

As a helper, keep this reference chart handy, or if you want to find an even bigger reference page, go visit the folks at WebMonkey, a page sponsored by HotWired at **http://www.hotwired.com/webmonkey/reference/index.html** and print out a very complete list of tags and styles.

Style	Mnemonic	Code
Bold	Bold	**<B></B>**
Italics	Italics	**<I></I>**
Large Print	1	**<H1></H1>**
Small Print	6	**<H6></H6>**
Other print sizes	2 (larger than 3)	**<H2></H2>**
	3	**<H3></H3>**
	4	**<H4></H4>**
	5 (larger than 6)	**<H5></H5>**
Center	Center	**<CENTER></CENTER>**
Unordered list	list without numbers	**<UL> </UL>** (**<LI>** needed in front of each item)
Ordered list	list with numbers	**<OL> </OL>** (**<LI>** needed in front each item)

Web Site Design

Now's the time to add some life to your Web site. I'm sure you've seen Web sites that are an ugly color or have a busy background? And you are wondering, "Why would anybody do that to it?" I've wondered the same thing, and like my mother used to say, "Beauty is in the eye of the beholder." What is beautiful to you may not be beautiful to someone else. (Also realize that backgrounds and other elements of Web design display differently on different platforms, browsers, and computer monitors. Check your Web work on a friend's computer to see if it looks like it "should.")

A good Web site starts with the home page with all the important information seen in the first screen without any scrolling. When you open a home page and see nothing and you have to wait for a big graphic to appear, probably you are going to open another site as soon as possible. For this reason, you want to capture your reader quickly with information that can be seen at a glance. Subsequent pages do not have to be as eye-catching and thought-provoking as the home page.

A good Web site should not be too busy. Don't go overboard with color and graphics and different font sizes. While variety might be the spice of life, it can be distracting and is another way to discourage people from visiting your Web site. After all, if you are creating an information bank for your students, you want them to visit your Web site, stay there, learn something, then come back again and again.

Look at some professionally made Web sites. See what they have done regarding color, font, and logo and take your cues from them. Usually, the logo is moderately small, the colors are attractive, and you see an index or means of telling you the content of the Web site so you can navigate around the many pages quickly. If you have a logo, don't make it so big that it takes up a whole screen. That means two things: a long download time (which is boring) and the logo is taking up valuable real estate on that home page that can be used for information. If you design on a computer with a big monitor, remember that most people still are looking at a small screen. You want to design your document with these simple rules in mind.

Organizing your information so it is easy to retrieve is an important element of Web design. That oftentimes means tables and occasionally, frames. There are lots of good Web sites out there that can tell you how to add them to your site. Reading some of these directions is like wading through molasses. My first rule of thumb is to look what works on someone else's site. If I find a Web site that has a table that I like; I block, copy and paste it to a word processor page; then put my specifics in place of theirs. After I've done that for a couple of Web pages, I begin to see the logic of the tags and I can figure it out from there. If I'm still lost, my students can usually show how something works. The kids have the time to play with different Web sites and tags, and they "get it" better than us oldsters can.

If you are interested in working with tables and frames, here are a few sites that will be of use. The Web Designer at **http://web.canlink.com/webdesign/** gives lots of user friendly comments about design, tables, frames, animated graphics, and the like. It's a good place to look at if you want to become a fairly proficient coder. Also, check out Project Cool at **http://www.projectcool.com/developer/framed-index.html** to get some ideas about tables, frames, and the like.

I like tables. They help organize information in a linear fashion. If you don't think in a linear fashion, stay away from tables. Tables are also very complicated to code, which is why I suggest "borrowing" your first table from another site. Frames however, are another story. If you are using a "frames capable" browser, you can first grasp the organizational scheme, then the problem, of frames. They divide the screen into two or more screens, each independent of the other so that you can have two or more screens appearing on your Web page at the same time. This is cool. However, if you want to click back to an item on a previous framed page, depending on your browser version, it may not always work. Instead, older browsers will put you back to the last Web site you visited. "Framed" pages are also slower to download and you know what that means. Finally, unless you design a second set of "no frames" pages, you will block out those potential Web site visitors with old browsers.

While we are on the subject of making your Web site more attractive, don't forget *color*. You can add backgrounds that are solid colors or with texture. You can change the color of your leading links and your followed links as well as the color of the font (but realize that some browsers will then make the text nearly illegible). To see how to add more color to your Web site, check out the background and graphics links that Easy, 1, 2, 3, has at **http://spring-board.com/123easy/map.html**. I still find this one of the easier pages to use and so do my students, both little and big.

While thinking about backgrounds, don't forget you can use graphic files. Caboodles at **http://www.caboodles.com/** has many different graphics and clip art collections from which to choose. You can search in Yahoo for any of these items. I just searched in Yahoo! for "html backgrounds" and received 39 hits, most of which were developed with people

like you and me in mind. That means not too complicated. To add a background color, go back to the **<BODY>** portion of the page and type **<BODY BGCOLOR="white">** and the background color on the Web page will be white. The new thing about background images is that you can choose a small image, say of a marble, and it will automatically be "tiled" to fill in the whole page with marbles. The HTML code is **<BODY BACKGROUND="marbles.gif">**.

Other Options to HTML Coding

There are other options available other than brute-force coding. You can "borrow" code from Web sites; you can use an HTML text editor program, or you can use a converter program. Let's look at these alternatives.

Borrowing code from an existing Web page is not difficult to do because you can use any text editing program such as SimpleText, Note Pad, etc. You just read and translate the document source code, block, copy and paste the parts of that source code you want to borrow and soon you will have a document ready for the Web. We've already discussed the direction for this process earlier in this chapter.

You can also buy or download a program that is designed to be used to create Web pages. There are a number of editor programs on the market such as "Adobe PageMill," "Claris HomePage," or you can download freeware such "HTML Assistant" (for PC) or "HTML Editor" (for Macs), or shareware like "PageSpinner." If you have a rudimentary knowledge of HTML, the programs will guide you through the steps you need to take to design a Web site. The older programs like HoTMetaL, had you work with the HTML tags, but newer programs like those mentioned above, do not. In addition, some of the newer word processing programs, like Microsoft Word and WordPerfect have primitive HTML editors included in them.

You might remember that I teach an online class based on this book from Indiana University. My students (who are mostly teachers) are required to design a Web page for the class. About half decide to "code" on their own, while half use an editor program. It's really up to you and what you are comfortable with learning. On the other hand, when I teach HTML coding to school

kids, I always teach them the code and the process long before I introduce an editor program. It seems to make the editor program make more sense that way.

However, the easiest way to encode an already existing document into HTML is through a converter program. In this case you do not even need to know HTML, as the converter program will translate an existing word-processed document and convert it into an HTML document. These are very easy to use and the program I like the best is Myrmidon. I don't recommend converter programs for students as I think there is a lot of learning that can be done when using HTML code. However, if YOU are in a hurry, the converter programs are available and they are "cool." If you would like to download some HTML programs, visit some of the following Web sites.

HTML Program	URL
HTML Assistant (for PC)	**http://www.brookworth.com**
HTML Editor (for Mac)	**http://www.w3.org/pub/WWW/Tools/HTML-editor.html**
Myrmidon (for Mac)	**http://www.terrymorse.com/index.shtml**
PageSpinner (for Mac)	**http://www.algonet.se/~optima/pagespinner.html**

Lastly, I recommend that you check out the following site for more information: HTML Developer's JumpStation on the Web **http://oneworld.wa.com/htmldev/devpage/dev-page.html**. I already listed HTML Quick Reference Guide earlier, but it is a good one. Check it out at **http://www.cc.ukans.edu/info/HTML_quick.html**. These well-organized Web sites are collections of tools, guides, articles, and techniques used on the Web.

In Your Classroom

How to build a Web site for your class

Building a Web page is an excellent learning activity for your students. Not only does it reinforce proofreading skills, it encourages reading and writing skills, aesthetic judgment, cooperation, collaboration and creativity. I hope you have the opportunity to use the following lesson plan in your classroom as it is one that has been used in many classrooms and it works.

Goal

To design, code, and upload a home page with the students for your class.

Rationale

You want the world to know what you are doing, and while the Web may be your window on the world, a home page is the world's window on you: Your class looks out, and the world looks in. You also want to reinforce skills in reading, writing, drawing, proofreading, and collaborating, and instruct in the relatively new skill of coding.

Objectives

- Students will compose a meaningful message for their home page and Web site.
- Students will develop expertise in collecting, organizing and writing data (both textual and graphical); in using HTML; and in producing and maintaining a Web site with selected links.
- Students will work collaboratively on the program.

Procedures

Designing your own home page is an excellent project for your class (or school) after everyone interested has experienced being online. When your students know a little about mining the Web for information and the types of information that are out there, they will probably have ideas for their own home page(s). Set the stage by telling your class that they can develop a short home page and put in on the local server, but that to do this, the server requires that they have a clear message and a reasonable reason for using the space—the more focused, the better; the more imaginative, the better.

At this point, brainstorm with your students to come up with the best reason for having a home page and a message for your class. One fourth-grade class has an interactive creative-writing project through which they are communicating with people all over the world. Another class is doing a global weather survey. Yet another is communicating the results of a scientific experiment that is being done in several classrooms across the United States, the United Kingdom, and New Zealand. Only the scope of your imagination and your students' imaginations constrain the boundaries of your possibilities.

Spark your students interest by finding several good examples of home pages written by classes that are similar to yours in terms of grade level or subject, and see what your electronic neighbors have been doing. Talk over what makes an excellent home page, a so-so home page, and a not-so-good home page. Look for home pages that convey a message that is appealing yet meaningful.

Brainstorm with your class about what they would like to see on their own home page. Revisit the issue of the reason for your class having a home page and what the message ought to be. Generate a list of ideas for possible contents—here's a starter list:

- student stories
- interactive stories (stories that are being written online in partnership with other kids in other places)
- your class or school newspaper (this idea is further developed in Chapter 9: The CyberNews)
- pictures drawn by students

- collaborative projects with other classes at your school or with other schools (an invitation to become keypals or online penpals)
- biographical sketches of famous people from your hometown or state
- favorite areas of study and hobbies with individual comments and questions
- science projects
- information and news about where you live, and maybe a virtual tour about the notable and scenic spots in your locality (like the one suggested in Chapter 11: Virtually Together in D.C.)
- pictures of everything you talk about
- audio clips and video footage (if you have the technical capacity)
- and oh! so much more

One caveat, if you provide any e-mail addresses on your Web page, realize that you are creating an open invitation to receive e-mail messages from all over the world. Be careful what information you and your students divulge to the world. They should not be telling the world their home addresses, phone numbers, and e-mail addresses without receiving prior permission. If you are ambitious, lead your class to become the force that organizes a home page for your entire school. (In that case, your class home page will be a link on the school Web site.) To involve other classes and even the whole school means that your class will have to accept the responsibility of teaching other people about the Internet. Think about the implications of this undertaking and talk it over thoroughly with all the major players. This can be a big project.

After the brainstorming period, it's time to prioritize and develop an outline of your proposed home page before you start writing, and long before you start coding it. Without this outline, you may lose direction and focus, and end up with a hodgepodge page that visitors will visit once but never again. Remind everyone that the page is going to be on the World Wide Web. This means it will be viewed and read by possibly thousands of people all over the

world who will build their only impression of you and your interests by reading your class home page. Posting a home page via the Web to the world is awesome, your kids will agree, a responsibility not to be taken lightly.

Display the outline on a bulletin board in your room. On this display, establish a schedule of deadlines: dates by which text has to be completed, and when links have to be identified and coded, when the home page will have its test run, when it will be reviewed and modified, and a schedule when links should be updated or maintained.

Assign different parts of the project to different groups of students according to their stated interests. Allow everyone to work with as many different parts of the project—organization, text, coding, graphics, proofing, etc.—as they like, so that they can exercise their talents and skills and take ownership of the finished product. Here's a check list of some of the groups that are useful:

- project coordinator or Webmaster (to help you keep up with everybody else)
- information and image gatherers
- copywriters
- coders
- editors
- proofreaders
- page designers and layout artists
- artists and graphics designers
- reporters (to get stories from other classes, the principal, parents, etc.)
- maintenance staff

You will certainly need a group to communicate with the people in charge of your intended Web server, where the site will be, whether your school's own systems technicians, an Internet Service Provider (ISP), a nearby university, a regional freenet, or some other on-ramp to the Information Superhighway. The job of

this group is to establish your right to and the process for uploading your home page on their Internet server.

The group that maintains the computer files during the building process exercises critical hands-on responsibility. Not only must they manage the files of the various elements of your Web site but also they need to keep a detailed list of all the files, with complete reference to titles and what each title means. This is work for your detail-minded students. For example, on the first Web site I created, there were 105 separate files, each one with a different name. To remember what the file names represented, I made a master list of the file names and what was in each file. Sure I could have viewed the file to determine what was in it, but a hard copy list was easier for me to refer to. Because I share Webmaster duties with another faculty member, we would be working at cross-purposes if we did not have our master list of files. In addition, Web pages have to be maintained and updated, and it is difficult to remember what 105 obscure titles mean, six months after they were written, especially if they were created by a number of students.

Even if your students are mature and responsible, I suggest that you will need eight arms and about the same number of eyes to keep up with all the groups and keep them focused on their tasks. Needless to say, no matter how young or old your students are, how responsible and mature, you are the Ultimate Webmaster: The buck stops with you.

After the home page is up and running, it will need a hands-on Webmaster, an individual who is responsible in every way for every aspect of an active Web site. That person will assuredly and ultimately, I repeat, be you yourself, but it would be good developmental instruction for the students to choose the right person from their midst to be the student Webmaster of public record, your associate in this responsibility. Your student Webmaster can have as many assistant Webmasters as seems desirable. I suggest rotating the job of Webmaster among the kids competent to do the work; that way, more people can learn from the experience.

Your students need to know that the class home page is not a passing fad but a high-stakes project that they are going to stick with through the entire year. I suggest, if possible, that you put a

counter on your home page that keeps a record of "hits"—it tabulates how many times your home page has been visited. Seeing those hits accumulate will help to maintain interest on the part of your students. If you get hits enough to prove to a client that your Web site gets a lot of traffic, you might even sell advertising space on your home page.

Technical Production of Your Home Page

After the home page copy has been composed, and the pictures and other information are gathered and organized, the home page needs to be formatted to be readable by a browser. You will need to teach your students how to put pictures in a correct format for downloading, how to write text files using the word processor, and how to code in HTML. None of this is as difficult as it may sound; the processes are fairly simple ones. The kids who do this work, however, need to be the ones who take instruction well, who have an eye for detail, and who can follow directions.

If you are using a word processing program such as Word or WordPerfect, click on "Save As" every time you want to save a document for uploading to your Web page. Because the "Save As" function lets you save files in a variety of formats, choose "text" or "text only" or "ASCII text" and then click on OK; your document is thereby saved as a plain text file. Should you happen to forget and not save a document as a text file, it cannot be read by a browser. In addition, your browser will not be able to read any text file unless it's name ends with the suffix .html (for Macintosh users) or .htm (for PC users). Therefore, a typical text file name might be "egc.html" and a typical image file name might be "egc.gif". The suffix ".html" has the function of telling the browser that the file is written in mark-up language while the suffix ".gif" tells the browser that the file contains an image. The newest versions of some word processing programs now allow you to "Save As" an HTML file. This is a real time saver.

After a document has been word processed and saved as a text file, put your proofreaders to work. Have them check for errors in content as well as spelling and grammar. You may want to have two groups of proofreaders, one for content and organization, another for spelling and grammar. When they have finished

proofing a file, make sure that it is saved as a text file once again. You can change text in a document after it has been marked up with HTML, but it is much easier to make changes while the document is still a word processing file, before it has been coded.

Your artists and coders need to work closely together. The artists help to design the page, while the coding crew puts in the tags to the text files. You will need to show your artists how to make image files using "gif," or "jpg," format. This will require a scanner and a graphics program like Adobe Photoshop, which can create a .gif or .jpg files from scanned art, photos or an image file.

Your coders will need to learn how to code in HyperText Mark-up Language. Earlier in the chapter you saw several HTML primers, and most of them are easy to understand. I've found quite a few other good HTML guides on the Net, so I listed a few more below.

HTML Guide	URL
Beginner's Guide to HTML	**www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html**
Crash Course on HTML	**www.pcweek.com/eamonn/crash_course.html**
Guide to HTML Commands	**www.woodhill.co.uk/html/html.htm**
HTML Quick Reference	**www.cc.ukans.edu/info/HTML_quick.html**
HTML: Working & Background	**www.w3.org/pub/WWW/MarkUp/MarkUp.html**
Learning About HTML	**www.indiana.edu/lp/lp_support/learn_html.html**
Project Cool Basic HTML	**www.projectcool.com/developer/framed-index.html**

Choose the guide that is best for your coders and for yourself. If you do have a good group of direction followers who can read documents, make sense of them, and put the directions to use. They should be able to work with any of the above HTML guides. HTML is not difficult to learn, but you, the teacher, need to learn it so that you can communicate with your HTML class experts. You cannot leave this task to your coders alone; they will need your assistance, especially the first time they start to code.

When you are finished putting in all the tags, it's time to put the page through a trial run in your browser program. In Netscape you do this by going to the File pull-down menu and scrolling to Open New File. Click on it and a window will appear asking where the new file is located. You locate the proper HTML file, click on it and hit OK. Soon the Netscape screen will show the document. If it has been coded correctly, it should look just as you want it to look. If it does not look that way, then you identify the errors and go back to the drawing board. Sometimes you will have to make many small changes in order for a file to look as you think it should look. If there are problems you can't find, you may want to use a Web-based HTML checker: Weblint (**http://www.weblint.com**) or Bobby (**http://www.cast.org/bobby**) are two such helpers. (I've made about two perfect files in all the time I've been doing HTML—it's harder to get them perfect the first time around than you think.)

Home pages require a lot of feeding, watering, and tending; therefore, your maintenance group, including your Webmaster(s), will become more important over the long term. There are times when you will not be able to do the needed maintenance on your Web page. When, however, the information on a Web page becomes dated and incorrect, you are definitely no longer putting your best foot forward! Look at the bottom of many Web sites and you will probably see a date. This date tells you the last time the page was updated. This is important if you are trying to get the most recent information. If you have date-sensitive information or links on your home page, you will feel the need for timely maintenance even more—possibly on a weekly or even daily basis. (I'm not exaggerating! Some Web sites are updated every day. My Web page gets updated once a semester.) If, for example, your Web page talks about a big event that's going to happen in the Spring, and it's already late Summer and heading into Fall, it's past time for some home page maintenance.

Evaluation

A finished home page with an address on the Web is but one piece of evidence that the project was successful; the public component. Less obvious, but more important, are the skills that have been

communicated and practiced: group participation, cooperation, and collaboration; reading, writing, drawing, layout design, proofreading, spelling and coding skills; the ability to follow directions; the honing of attention to detail; and the individual personal responsibility required to achieve presentable work for public display. Your class will have met a full spectrum of opportunities to learn in every aspect of the curriculum. Putting a home page up on the Web gives new meaning to the phrase "across the curriculum."

Included at the end of this chapter is a rubric for evaluating a student-made Web page. It was modified from the one found at "Tammy's Tech Tips for Teachers" at **http://www.sv400.k12.ks.us/tips/webpagerubric.html**.

How to Publish Your Own Home page

To publish pages on the Internet, you will upload your pages to a Web server computer using FTP software. The first thing to do is find out who can publish your Web page. If you are part of a freenet or school system that has Web page space available, find out their requirements and procedures for uploading. You can also have two home pages published free by Classroom Connect. See **http://www.classroom.net/** for more information about this.

You can search the Web using the command "free web space" to find other places that will publish your Web page for free (or at least inexpensively). I just did a search with MetaCrawler and came back with twenty-eight hits. There is a lot of Web space, so there is no excuse not to publish your page.

Things You Don't Want to Do

I would be remiss if I did not mention some of my pet peeves about Web page construction. I'm sure you have seen Web pages that are just too busy, have a terrible background color, or have

just too much stuff on them. Think about those things that really bother you when you visit a Web site, and try not to make those mistakes. Here are some design problems that really bother me.

1. **Frames.** Netscape and Internet Explorer support frames (and I wish they didn't). They look interesting, but sometimes they do not work as well as they should. I've had a hard time bookmarking "framed" pages as well as using the "Back" command.

2. **Scrolling Texts, Marquees, and Constantly Running Animations.** I find these pages very distracting. A Web site with moving images on it makes me want to click to another site fast. I use the Web to find information, not to see Times Square.

3. **Complex URLs.** You know what I mean . . . the URLs that seem to go on forever and ever. As you know, URLs have to be typed perfectly, so the chances of making a typo is greater with a long or complex list of meaningless letters than with a short list of sensible abbreviations. Try to use short names with all lowercase characters and no special characters such as # or $.

4. **Long Download Times.** Sites that have lots of graphics or exceptionally large audio/video files take too long to download, especially for a school setting. If it takes too long to get the information, students become bored. You don't need that!

5. **Dead pages and outdated Information.** A dead page is one that has just disappeared from the Web without a forwarding address. There are also Web pages that have not changed for four years. Avoid catching this malady.

6. **Long Scrolling Pages.** Somewhere I read that only ten percent of all users scroll beyond the information that is visible on the screen when the page comes up. That's why I like critical content and navigation options on the top part of the home page.

7. **Blinking Pages.** Last but not least, I cannot stand pages that blink at me. At first I thought they were fun, and I made a few, but as I see more of them out there on the Web, I'm sorry I ever liked them at all. I find them very annoying, especially if I'm trying to read something near the blinking. Blinks would be OK if the user could turn them off! I also do not like distracting animations on a page (and I really dislike flashing advertisements, but they usually do not appear on school pages).

To test your mastery of HTML, you can take the tutorial developed by Eric Meyer at Case Western Reserve University. Turn on your browser and open **http://www.cwru.edu/help/IntroHTML/toc.html**. (By the way, I've been talking with Eric via e-mail, and he would like your comments, so when you are finished with the tutorial, e-mail him with your feedback. He will appreciate it.)

I hope you enjoyed learning HTML. Whether or not you get your class Web page up and running, send me some e-mail about what you are doing with the Internet. You can reach me via e-mail at **cotton@instruction.com**. Tell me about your class, and what they have been doing with the Internet. I'll write back!

See you on the Web!

Evaluation Rubric for Creating a Web Page

Assessment Area	Exceptional	Good	Fair	Needs Improvement
Layout / Design	• Well organized • Eye catching • Uses special features like tables • Text spacing and alignment make reading easy • Backgrounds enhance the page	• Attractive page • Good organization of text and graphics • Easy to read text • Backgrounds are appropriate	• Page appears "busy" or "boring" • Text may be difficult to read • Backgrounds somewhat distracting	• Unattractive pages • Text difficult to read • Distracting backgrounds
Art/Graphics	• Photos, icons, and clip art are used creatively and follow a theme	• Photos, icons, and clip art are appropriate, of high quality, and download fairly quickly	• Photos are blurry or fuzzy • Icons and clip art do not "fit" topic. • Too many pictures make download time slow	• No photos, icons or clip art • Inappropriate or of low quality photos, icons or clip art
Information	• Creatively written and cleverly presented	• Well written information • Interesting to read and use • Information is not too long or too short per section	• Information is not written well • Too much information is given per section	• Poorly written, inaccurate, or incomplete information
Navigation/Links	• Links are created with images and icons to enhance the text links • All links consistently work	• All links work and easy to find • Page is not confusing as the user can navigate back and forth through pages	• Some links are dead • Page is confusing to user	• Links are dead or inaccurate • The user may become confused or bored
Working Together	• Teammates show respect for one another • Get along well • Work together on all aspects of the project	• Teammates get along well • Teammates share equally in all responsibilities	• Teammates have trouble solving disagreements • One team member does most of work	• Teammates argue much of the time • Responsibilities are not shared
Following Classroom Guidelines	• Teammates are always on task, stay in their own area, and cause no disruptions	• Teammates stay in their area, talk quietly to their teammates only • Teammates cause minimum disruptions	• Teammates occasionally leave area without permission • Teammates are louder than necessary	• Teammates are often out of area without permission • Teammates cause disruptions

Modified from Tammy's Tech Tips for Teachers at http://www.sv.400.k12.ks.us/tips/webpagerubric.html.

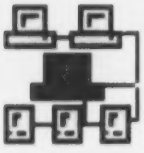
Chapter 6:

The Past, Present and Future of the Web

We'll look at three topics in this chapter: Where the Internet has been with programs like Telnet, and Gopher; current capabilities of the Internet such as Multimedia; and a possible future for the Internet. Just remember: I don't have a crystal ball nor can I see into the future!

The Past

When the Internet (called ARPANET) was started in the late 60s by the U. S. Department of Defense, it was funded to create a decentralized computer network in which developers and researchers could easily communicate with each other using different types of computer systems. There was a real advantage to this type of compatibility across platforms (as it is called). This early network linked research universities, research laboratories, and some military labs together using primitive versions of communication programs via Telnet, FTP (file transfer protocol), e-mail and newsgroups. With Telnet and FTP, a research scientist could download files that were stored on the networked computers anywhere in the U.S. Within a decade, the network grew to include connections in other countries and Telnet and FTP became standards of communication worldwide. The network continued to grow and more



demands were made on what it could provide to researchers. To meet these demands, Gopher was created. Instead of Telnetting to a site and ordering a file sight-unseen, as was the case with FTP, the user could now read the file at a Gopher site and then choose to save it or not. In addition, "ordinary" people started to access the network through universities and businesses. I had my first e-mail account in 1977 while I was a university student.

In 1991, Tim Berners-Lee, director of the W3 Organization (an affiliate of CERN, now called the European Particle Physics Laboratory), created the World Wide Web using the http:// protocol and its system of hypertext links. Then simplified navigation programs like Lynx and Mosaic were developed, the old ARPANET ceased to exist,.and even more people from "ordinary" walks of life got hooked on the Internet. The World Wide Web was the force that brought about the exponential use of the Internet. Instead of being a researcher or a scientist, the average Internet surfer could be a regular person, who wanted to make use of this communication device. Soon millions of ordinary folks like you and me were accessing the Internet.

As more people started to use the Internet and the World Wide Web, it became evident that the older programs like Telnet and FTP were not user friendly. However, they are still used on the Internet, but they are not as evident as they were once. Nowadays, Telnet is used to access libraries and other research facilities. It does not have the graphical user interface of Netscape or Internet Explorer, and it turns your computer into the classic "dumb terminal" which means a keyboard connected to a computer "out there." To access files using this technology you need a Telnet program, usually available from your Internet provider.

FTP or File Transfer Protocol is another program that is still used 30 years later. In the old days you needed a program called FTP (for the PC) or FETCH (for the Mac) that allowed you to grab a file from a computer "out there" and download it to your computer. You did not see the files beforehand. Now, when you want to download an FTP file, you just click on the link in your Web browser and you are transported to an FTP site and the downloading happens almost automatically. About the only time you might use an FTP program nowadays, is to download files from an e-mail server or to upload files to your Web site.

The last "golden oldie" is Gopher. This Internet program was developed by the folks at University of Minnesota and supposedly named after the school mascot. It was an advantage over Telnet and FTP as now you could actually see a file before you downloaded it. Alas, when the World Wide Web and hypertext links were created in 1991 and in the six years since, most Gopher sites have been replaced by Web sites or have just vanished. Every so often you will see a gopher address and you can access it in your browser by typing gopher:// in the Location box.

By the way, there is a "bunch" of vocabulary left over from the "old days" of the Internet and some of it is still used. If you want to search the Telnet files, you do an Archie search (which is short for Archive Search). Archie had a girlfriend named Veronica and that became the name for the search engine used in Gopher. Jughead was their friend, and "he" is the equivalent to the Find button on Netscape.

The Present: Multimedia

That was the past, let's look at some of newer Internet features that make your Web browser and the Internet fancier and more functional. Many of them have curricular potential and you might want to consider them as part of your Internet repertoire. In this section, we will talk about the use of multimedia. Simply put, multimedia is features that make a plain Web site explode with sound, color, three dimensions, and motion. Technically, multimedia consists of specific kinds of files that are added to a basic HTML page.

There are some multimedia Web sites of merit that you might consider. However, to make them fully functional, you often have to download a plug-in, install it, then click back to the Web site you wanted to view in the first place. This does take time, so before you work with multimedia Web sites in your classroom, download everything beforehand and practice. One other problem exists, too. Even after more than a year, multimedia is still not aimed at the educational market. Because of this, there are few quality Web sites for educators to use. This will change, as more educators become familiar with the additional features that multimedia can offer.

Given the above, there are some multimedia plug-ins you might want to consider. Apple Computer's QuickTime is one of the most popular plug-ins on the Net, with over 20,000 sites currently featuring QuickTime files. There are a couple of different types of QuickTime files that you can download from Web sites. The most popular type of file is a QuickTime movie file (designated by a **.mov** suffix) which allows you to view a short (very short) video clip either in your browser—if it is properly configured—or via an external QuickTime window. Don't expect great picture quality from these postage-stamp size clips, but they are fun to watch if you can deal with the long download times. To learn more about QuickTime, go to **http://www.quicktime.apple.com**. To see a QuickTime Web site that educators can use, try the recent Mars expedition at **http://quicktime.apple.com/mars/**.

There is a second type of QuickTime file called QuickTime VR. QuickTime VR files allow you to look at photos in three dimensions as well as zoom in and out on them. This is useful when working on mapping skills or for looking at details. For a list of QuickTime VR sites go to **http://qtvr.quicktime.apple.com/sam/sam.html**. If you are studying Africa, there is a Web site at **http://qtvr.quicktime.apple.com/movies/wnet/wnet.html** where you can view the Mara and Ambolesi valleys. You can also view Rome, Pisa and Naples in Italy at **http://www.webcomp.com/virtuale/us/home.htm** and for the inside story on the Egyptian Pyramids, check out **http://www.pbs.org/wgbh/pages/nova/pyramid/**.

Another popular plug-in is Macromedia's Shockwave, which allows a Web site to be more interactive, with animations that you can click on and watch them change. Many Shockwave-enhanced sites use the plug-in to provide little games for their visitors to play. For an archive of "shocked" sites go to Macromedia's home page at **http://www.macromedia.com/shockzone/ssod/**. While you are there, you can download the plug-in software that you need, and if you have a problem, there is an online technical support "desk" to offer assistance. Some "shocked" sites that have curricular value are **http://www.viking1000.org/game/vikeshock.html** where students can simulate a Viking

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voyage, and possibly Planet Zoom at **http://www.planetzoom.com/zoomtop_1.htm** where you can take a three-dimensional tour of the Web.

These Web sites show a positive use of plug-ins for schools. I always hark back to the bottom line . . . how can I use this tool with my curriculum? What is an objective for this Web site that will advance my object of study? If I cannot relate a Web site to my curriculum, even a cool one that has video and sound, I don't want to bookmark it. I consider it a waste of valuable time.

For those of us who are still bewildered by multimedia and plug-ins and what they mean, you can get even more bewildered by Falken's Maze. This Web site tries to organize all the plug-ins out there and tell you what they do. Open **http://cybertools.thru.net/tools.shtml** to find out what it's all about. Check out Browserwatch at **http://browserwatch.iworld.com/** for more information about plug-ins. Williams College has a Mac Software page that has some information at **http://wso.williams.edu/software/mac.html**. Also my university (California State University, Chico) has a site on plug-ins that I found useful, probably because I actually know the people who wrote the site and if I need help, I can ask them directly. Whatever the case, see what California State University, Chico has to say about plug-ins by opening **http://www.csuchico.edu/computing/INTERNET/helpers.html**. If you want even more information on plug-ins, do a search in MetaCrawler. In the query box type "plug-ins."

The next step when discussing multimedia is actually putting or "embedding" plug-ins into your Web site. This is definitely in the realm of advanced Web design. Since some of you reading this book do not now have the advanced skills or the software needed to create these types of multimedia files, and will have to use files created by others, I can give you this piece of advice: upload the file to your server, create a link to it, and try to download it with a browser with the relevant plug-in. If that doesn't work, call in your techie or visit the plug-in manufacturer's Web site for help.

In addition to plug-ins there are other Internet-based programs that add more functionality to your computer. A few are described below. Some of the programs are both stand-alone programs and plug-ins that you can add to your browser. A word of warning, however. Every time you add a plug-in to your browser, you are also requesting more RAM and possible longer download times. If it takes too long to download something, I get bored students. You know what happens then.

Internet Relay Chat (IRC)

Internet Relay Chat has been around for some time and I believe it has now come of age. There are many Web sites now that offer chat lines for teachers or students as well as regular people. I like IRC, especially in a *controlled* environment! By controlled environment, I mean one where I create the chat room and monitor conversation for relevance. IRC can make the Internet more interactive, more real, and more personal. With an IRC program you can talk to folks in real time, from several different time zones, for the price of being online, *and* you can keep a transcript of the conversation for future reference.

Once a week I chat with my Indiana University students. We have a set time and channel where we meet, and all we have to do is log on there and then. Sometimes I have folks chatting from 14 different time zones from California to Indonesia. We take care of class matters as well as "just talk," as there is no other way to get to know folks in this class. It brings about a sense of community that is amazing, and most of us miss the chats when the semester is over. When the NASA shuttle goes up, sometimes an IRC is arranged where classes can chat with the astronauts. Can you imagine what it feels like to "talk" to an astronaut, ask him or her questions, and then get the responses from space? What a powerful tool! I have used IRC with many K–12 classrooms connecting students from two classes in different parts of the U.S. who are studying the same topic. It's always interesting to see different perspectives on the same topic. It helps to broaden the horizons of all the students.

There are several stand alone IRC programs available as well as plug-ins you can add to your browser. Right now I am using IRCle (a chat program for the Macintosh). It's a shareware program that

you can download at **http://www.ircle.com/**. If you are using a PC, you can use a mIRC (also a shareware program). To find information about mIRC, go to **http://www.geocities.com/SiliconValley/Park/6000/** for the Official mIRC Home Page.

There are many more shareware IRC programs available, these are the two I've used and they do work. You can also download a plug-in that will allow your browser to become an IRC. IChat is one such device and you can find out more information at **http://www.ichat.com/**.

IRC in its various forms has great potential in a classroom, but another word of warning. There are moderated and unmoderated IRCs. With a group of students, I only use a moderated IRC where I arrange the time/place/activity with a group of people or I have been asked to join a group that has arranged a time/place/activity. In this type of IRC, you can talk to folks about a particular issue or project. You can exchange ideas quickly as well as get your own point of view across to others. Recently, I demonstrated an IRC to a group of teachers in New York City. I had prearranged a meeting time and place. At the agreed upon time, we had teachers from 2000 miles away talking to the New York teachers about how they were using IRC and the Internet in their classrooms. There was hardly any "down time" and the lively and interested camaraderie that developed among the chatters was very rewarding.

There is a problem however. A moderated IRC is a very informative tool that can be used to enhance learning. This is a positive use of IRC in your classroom. There are also IRCs that seem to be "meet" markets where there may be questionable language and conversation among the participants. Don't prejudge IRCs as all negative. Some interesting and educational forums have also taken place using IRC.

Another word of warning is spelling and grammar. A shorthand way of writing develops when you use an IRC because you want to relay your message as quickly as possible. You might see messages using abbreviations like BTW (by the way), LOL (laughing out loud), FOTFL (falling on the floor laughing), IMHO (in my humble opinion), or emoticons [those cute little sideways smiley faces like ;-) or 8>)]. You will also see a lot of typos. My husband is amazed at how fast I can type when on an IRC. It's

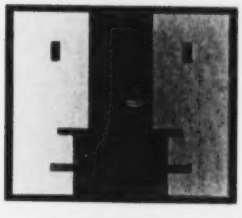
necessary. However, you might see a zillion typos and lots of funny abbreviations. Folks who use IRC are used to this; other folks might be appalled that you are reinforcing bad grammar and spelling. Know this facet of IRC before you take the leap.

Video and CU-See Me

As the technology matures, IRC programs have become better forums for the exchange of ideas. Already several software developers have created an Internet counterpart to a telephone call. With the correct software and hardware, you can talk (not just type) to someone else (who also has the software and telephone) over the Internet. This can be a "long-distance" telephone conversation for the price of the local dial-up phone call to the Internet provider. And, if you have a small camera connected to your computer, you can even have a live chat face-to-face with another person or group.

This leads to CU-See Me (pronounced "see you, see me"), a program developed by the folks at Cornell University. It allows you to see me and me to see you, provided we both have video-receiving and video-sending units. CU-See Me has been used by doctors in remote locations to clarify medical problems. There have been hundreds of CU-See Me Internet Conferences, sometimes called "TeleConferences" where attendees show up at "studios" across the country that have CU-See Me setups. The conferees see and talk to each other via the Internet and the video hook up. It's the ultimate high-tech business meeting! While you do not have a typed script of what was said, you can have a video record of the conference (if you have the memory available to record it all). Very cool! CU-See Me can be a powerful device to get two or more groups of folks talking about a common topic. To learn more about CU-See Me Schools, open **http://www.gsn.org/gsn/cu/index.html** at Cornell. The cameras and software for this type of video conversation are getting cheaper all the time. Check it out, you might be able to afford this once-luxury item.

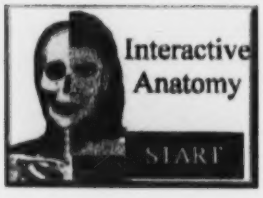
CU-SeeMe



Desktop Videoconferencing
[illegible]

Java

Within the past year the Web has taken on a new dimension—that of Java. Two related Web sites that I just became aware of show the promise of how this dimension of the Internet can be useful to schools. They are Human Anatomy On-Line at **http://www.innerbody.com/** and Automotive Learning On-Line at **http://www.InnerAuto.com/**. Both contain detailed lessons: one on the human body, the other on the automobile. Open them up and experience Java applets (small applications) that allow the user to point and click to a part of the body or a car, and receive an explanation of what that part does. In some cases there are animations showing exactly how the part functions. There are tutorials at each of these Web sites that make learning about either topic enjoyable and informative. Since they do not take too long to download, it is a forerunner of what can happen to Web sites that have been spruced up with Java and other multimedia devices.



If you are wondering what Java is, it is a computer programming language, not just a text markup language like HTML. It is much more complex and difficult to learn. I'll call it part of a family of Internet-based languages (CGI, ActiveX components, JavaScript, and VBScript) that make Web sites dynamic and alive. When you access a site that includes Java, a small computer program is automatically downloaded onto your computer. As soon as it is downloaded, it begins to run. Java applets can do anything a regular computer program can do: word processing, graphics, juggle a database—the possibilities are endless. Some people think that with a Java-enabled browser (like Netscape or Internet Explorer) you won't even need to own any other programs. But this *is* in the future!

The Future of the Web

What comes next? More Web sites that are Java-enabled. Built-in plug-ins that will not take as much RAM. There's talk of Web sites that have Java-enabled "monitoring" devices that will limit access to underage folks and allow greater access to older folks. Development teams are creating ways to make your offline computer programs and your online programs have a seamless interface. The future is only as limited as the human imagination. Right now there is more happening on the Internet than most folks can keep track of. Simple Web sites are enhanced with music, graphics, animated graphics, movies, three-dimensional images, IRCs, Java games, and a host of other plug-ins. I am convinced that as more educators become involved with the Internet, Web sites will have better curricular value.

Section 2

Lessons

Chapter 7:

E-pals and Keypals

The past few chapters have shown you ways to retrieve information from the Web using your browser. You have been visiting Web sites, reading information, clicking on links, and engaging in one-way communication. With e-mail (electronic mail) you can engage in two-way communication on the Internet, and you can initiate a conversation as well as reply. E-mail is one of the most powerful and useful tools available through the Internet. E-mail is also possibly the easiest service to use on the Internet.

When you're in an e-connection with your e-buddies around the world, snail-mail (a somewhat derogatory term for the postal system) becomes a thing of the past. No more phone tag, voice mail, missed calls, lost mail, insufficient postage, or expensive overnight FedExes. (Now we have downtime, system bugs, and the promise of upgrades instead!) With e-mail you are in direct, immediate, and almost instantaneous contact with people all around the world. (Some e-mail communications take time to get where they are going, depending on the technology involved; and even people who use e-mail still forget to read and answer their mail!) With e-mail, you can always find your correspondents, and they can always find you. You can write messages to each other, read messages, file them, print them out for documentary evidence, and/or respond. And you can do all this without having to think on your feet as you do with a telephone call—you can take your time as you ponder your e-mail replies, correct them, or even change your mind and delete them rather than sending them.

Then, once your messages are sent, many e-mail systems will automatically file away a copy of your reply for future reference. It's that simple and that wonderful!

Once you have an Internet account, you have an e-mail address. To send and receive e-mail, you need an e-mail software program, but so many of these are on the market, and easy to install and use, that I will not bother to attempt to list their names, discuss their merits, or explain how they work. They're all pretty much alike, except that the specific command language differs from program to program. For example, "write a message" in some programs might be called "compose" in other programs; in some programs, Command-S will send a message, while sending is accomplished with a Control-X command in other programs. And so on and so forth—you have to spend some time getting used to the quirks of whatever program you have. Most programs have more-or-less the same heading at the top of each message: a "To:" line (e-mail address of the recipient), a "Subject:" line (space for a topic heading), a "Copy:" or "cc:" line (if you want to send a copy of the message to someone else simultaneously), and a "From:" line (your e-mail address to which your correspondent may reply); some programs are more complicated than this. Most Internet providers give you a copy of their preferred e-mail software, along with instructions.

Another item of similarity for all the programs is your unique address, yours alone, much like a social security number. E-mail addresses, while they might look long and somewhat confusing, are relatively easy to decode: Think of an e-mail address as analogous to a snail-mail address. In snail-mail, you have a name, a street address, a city, a state, and a ZIP code. Likewise with e-mail, you have a name, the @ sign, the server ID (= the street address), a dot (.), location of the server (= city and state), a dot (.), and a domain (= ZIP code).

For example, my address is **ecotton@oavax.csuchico.edu**—*ecotton* stands for Eileen Cotton; my server is at (@) a computer called *oavax*, located at California State University, Chico, (*.csuchico*), where I teach, so it is an educational domain (*.edu*). Quite often, the name section is the first initial and last name of the person at that address (as in my case), but this is not always

true. I have an e-friend who has a series of numbers in the name section of her address; while this makes her relatively anonymous, it is difficult to remember. Fortunately, many e-mail programs give you the ability to make nicknames so you don't need to remember long "handles."

Domains other than education (**.edu**) will be reflected in the last part of e-mail messages that you will receive: **.com** (commercial); **.org** (noncommercial organization); **.k12** (school district); **.mil** (military); **.net** (network), and **.gov** (government). E-mail addresses outside of the U.S.A. have a country abbreviation, a two-letter suffix after the domain: **.jp** for Japan; **.ca** for Canada; **.uk** for the United Kingdom; or **.nl** for the Netherlands. Some e-mail addresses in the United States end in a two letter abbreviation for a state, as well as **.us**.

A fun exercise for your students is to collect domains or countries like some people collect stamps. See how many different countries are represented by the addresses they see on the Internet, then mark these countries on a world map. It's a painless way to learn geography. On the other hand, please do not encourage your students to randomly send e-mail messages to strangers in order to collect unusual addresses. This is not polite.

Notice that I have written all the e-mail addresses in this book in lowercase letters: ecotton, not ECotton. This is not required in this instance and certainly not by every system, but it *is* required by some systems—these uncooperative systems are said to be "case sensitive." It's a good idea, therefore, to get into the habit of typing all your Internet addresses in lowercase letters, rather than upper, to avoid the headache of that nasty, machine-generated reply: "Undeliverable Message."

What purposes does being on e-mail serve? You can talk with another person about a topic of interest to you and your correspondent, quickly and cheaply. You can share news, voice opinions, compare and contrast facts and figures. It's a great way to encourage your students to read and write in an "authentic" (real-life) situation. It's electrifying for kids to realize that they are in e-contact with somebody in Russia or Africa or Asia. E-mail is fun, easy, informative, and inherently educative, for as they say,

"travel is broadening," and e-mail is electronic travel. Now that we have e-mail, our telephone and mail habits have changed as e-mail is the most-used portion of the Internet. Using e-mail will prepare your students for their immediate and future personal, academic, and business communications.

To communicate with someone else on e-mail, you need the other person's e-mail address. At present, the best way to find someone's e-mail address is to call them up and ask for it. Short of a phone call, you can try the Web and your browser. At a Web site called "Finding E-Mail Address" at **http://darkwing.uoregon.edu/~rhaller/emailad.html**, you can type in all of some of the information they request at a prompt box, and a search will be made to find the e-mail address you are requesting. You can also find e-mail addresses at WhoWhere (**http://www.whowhere.com/**), The Internet Address Finder (**http://www.iaf.net/**), the Big Foot Directory Search match (**http://www.bigfoot.com/SEARCH**) and the Yahoo People Search (**http://www.yahoo.com/search/people/**). However, if a person has not registered his or her e-mail address, it might not be on any of the directories. Without a registration, "they" will not know who you are looking for.

Another way to find a specific address of someone you are seeking is to send an e-query to the "postmaster" or the "Webmaster" at the site where you think the person's e-mail account resides. People almost always include their e-mail address as part of the information on their home pages. If you forget my e-mail address, but remember my name, then either send a query to **postmaster@oavax.csuchico.edu** and ask for Eileen Cotton's address or look me up on our CSU, Chico home page. Most postmasters and Webmasters are very helpful; some aren't though, sometimes for security reasons.

At first, you and your students may have the problem of having no one to send e-mail to. A quick and easy way to solve this problem is to subscribe to a list (often called a listserv)—a special-interest group that talks about something you are interested in. Right after you e-mail your subscription to the listserv—probably that very day, and sometimes within minutes—you'll have more e-mail than you have time to read (fortunately, you can always

delete messages that aren't of interest to you). After you have "lurked" on the sidelines for a while, learning the character of the list and the habits of the people who frequently post messages, you can take part by sending a message to the list. Your first message should be a simple one of self-introduction: "I'm new to this list. I'm interested in . . ." Someone will answer! You may be surprised at how many replies you will receive to your message. Here, however, is a point at which to teach your students reasonable cautiousness: Just as we tell kids not to take candy from strangers and not to get in cars with people they don't know, tell your kids not to give out their phone numbers, home addresses, credit-card numbers or other personal information over the Internet unless you or a parent knows.

How do you find lists that interest you and your students? How do you subscribe? These mailing lists are sometimes called "mailing lists," "listservs" or "networks," and there are thousands of them. You can subscribe to lists that deal with kids, learning, education, computers, libraries, art, music, endangered species, media, sports, any content area you teach, and any subject you want.

To find up-to-date lists of listserv, go back to the Web and open **http://www.neosoft.com/internet/paml/bysubj.html** to find a list of publicly accessible mailing lists or listservs. At the same Web site, you can also find education-only mailing lists. That URL is **http://www.neosoft.com/internet/paml/bysubj-education.html**. Another List of Lists, called TileNet, can be found at **http://tile.net/lists/**. Each of these generic lists of lists will give you the basic information you need to both subscribe and unsubscribe.

E-Mail Etiquette or Netiquette

Before your kids start joining lists, you have the perfect opportunity to give a lesson on e-mail etiquette or "netiquette" as it is called. Just like you have to learn which fork to use when dining, there is a protocol to learn with e-mail. It is impolite to write a message using UPPERCASE letters, as that seems like you are

SHOUTING at your correspondent. Don't type any "naughty" words. Don't be overly antagonistic when you write a message; in other words, don't flame. The Netiquette Home Page by Arlene Rinaldi does a good job of explaining the proper rules of E-mail and the Internet. Go to **http://www.fau.edu/rinaldi/netiquette.html** and check it out. She claims she is not the Miss Manners of the Internet, but you could fool me.

Teachers and Kids In the Ether Together

Because K–12 is what most of us do, K–12 discussion lists are a good starting point. If you don't want to look up your own lists, then you can subscribe to any of the K–12 mailing lists listed below by writing a message in the format specified below to the addresses provided.

Kidsphere Network is an excellent list for teachers, with two components: one for teachers and one for kids. To find out what Kidsphere does, go to **http://www.neosoft.com/internet/paml/groups.K/kidsphere.html** or you can subscribe:

To:	kidsphere-request@vms.cis.pitt.edu
Subject:	(leave blank)
Message:	subscribe kidsphere *Your Name*

The Web66 mailing list deals with using the Web in your classroom. To find out more information go to **http://web66.coled.umn.edu/List/Default.html**. You can subscribe to this mailing list:

To:	Listserv@tc.umn.edu
Subject:	(leave blank)
Message:	SUBSCRIBE Web66 Your Name (write "subscribe" in UPPER CASE LETTERS)

The Discovery Channel School has a mailing list that centers around the programming that will occur during the upcoming semester. You can join that mailing list online at **http://school.discovery.com/mailinglists/index.html**. I will be on that list as I have been involved in working with one of the weekly programs.

In e-mailing your subscription to a listserv or mailing list, when I say for you to write *Your Name* in the message field, I mean for you to type in your own name after you write the words that come before (and a space); this is the name to which the server will send the automatically generated reply. When I subscribed to Kidsphere, it looked like this:

To: kidsphere-request@vms.cis.pitt.edu
Subject:
Message: subscribe kidsphere Eileen Cotton

To subscribe to any online list, you use the same formula: subscribe <name of list> <Your Name> do not write your e-mail address as they can figure that out. Do not type anything else! You are going to send this message to a computer, so you can leave the subject line blank—no sense in confusing the machine with unnecessary information. Indeed, the absolute rule when communicating with a listserv, whether to subscribe or unsubscribe or ask for other services, is to use only the specific language which that system requires. After you send the message, a response will arrive stating the rules, protocols, and FAQs (frequently asked questions) of that list, among them being this most important question: "How do I get off this list?" Save this information! I didn't do that for the first two lists I subscribed to. Later, when I needed help, I did not know how to get it, and when I wanted to get off the lists, I didn't know how. Sometimes you want to take a vacation or escape from a list, and the set of FAQs tells you what you need to know to control the list's access to your e-mail box. Deleting the instructions is a terrible mistake! Either print out the FAQs or save them to your hard drive so you can reference them easily.

All lists have three addresses: (1) the discussion address, for ordinary purposes; (2) the automatic address, for requests that will generate automatic machine-generated administrative

responses; and (3) the address of the list moderator/owner/SysOp (systems operator). If you want to discuss things on the list, use the discussion address. If you want to unsubscribe, receive an archive of previous listings, find out who else is a member of the list, or get a digest version of today's correspondence, use the automatic address. If you want to talk privately to the moderator, use the third address. Try not to get these addresses confused. It is usually easier to remember the discussion address than it is to remember the other two. This is one of the few times when pencil and paper can still be helpful.

Use the moderator's personal address, not the listserv address, when you want to complain about some list member's lack of netiquette or when you are hopelessly confused and don't know what to do next. The moderators of some lists look at the incoming mail and screen it for pertinence; other lists are unmoderated. For school purposes, I prefer moderated lists. A savvy, fair-minded moderator can keep a list civilized.

Lists just for kids abound, but since they generate a lot of e-mail, you need to think twice if you want your students to subscribe. There are a number of lists to which kids may subscribe and where they will find many willing penpals—or, rather, keypals or e-pals. To subscribe to these lists, you and your students will send subscription messages that follow the guidelines stated above. Notice that the name of the list and the address to which you send your subscription are not always the same. In your subscribe command, use the name of the list, not the address of the list. Go to International E-mail Classroom Connections—a list for teachers who are seeking classes to partner with their classes for international and cross-cultural e-mail exchange. This list is maintained by St. Olaf's College and is very comprehensive.

To:	iecc-request@stolaf.edu
Message:	subscribe IECC Your Name

Other than setting up keypals and e-pals, what else can you do with e-mail? Lots! And a student of any age who can hunt and peck out words on a keyboard can take part. Even little kids who can't write or type can dictate messages to big kids who can. The idea of having e-mail waiting is very enticing, and most kids get

excited at the discovery that there are people out there who want to speak with them. The ease with which one generates, corrects, and deletes text on an electronic keyboard; the relative interpersonal immediacy of e-mail; and all the many other fascinating aspects of this new toy, the computer on the Internet, make it the greatest incentive ever to early literacy. For little hands struggling to gain small-muscle control, it used to be hard to learn to write; now it's easy—and they're never too young to start. To find out about some e-mail projects on the Web, go to **http://www.otan.dni.us/webfarm/emailproject/email.htm**. You'll see projects on writing, cookbooks (favorite foods), pizza (from my university no less), buying a house, home remedies, as well as other projects you might want to participate in.

Email Projects Home Page

One spring semester, I was in e-mail communication with a first-grade class, and the youngsters clearly understood what they were doing. Each week we talked about the flowers that were blooming and the birds that I had seen that past week. I would ask them mini-research questions and they would give me answers. Never think that your students are either too young or too sophisticated to participate. And don't be surprised or offended when your young students take more readily to computers and the Internet than you do. It's called the Generation Gap, and this time, you and I are on the wrong side! Turn them loose, let them go, and learn from them all you can!

In Your Classroom

Keypals on the Internet

Goal

To broaden the horizons of your students while encouraging reading and writing skills, higher-level thinking skills, and civilized discourse with other members of the human community.

Rationale

It's always nice to have someone else to talk to, to bounce ideas off of, and have a gossip fest with. It's also good to have friends all over the world in case you ever go on a long trip.

Objective

Students write and respond once a week to a keypal not in their hometown. Purpose of the e-mail correspondence is to discuss, compare, contrast, and analyze topics that are being studied in class (from weather-watching to bird-watching, work and hobbies, culture and dating habits, moms and dads, food and algebra, world events and local disasters, just anything).

You must decide beforehand the exact purpose you want to emphasize and you should have a class of e-mail recipients arranged which is also working on the same objective.

Procedure

Before starting this assignment, you have done the background search and identified a classroom of keypals for your students. Set the stage with your students by sharing some e-mail from a list on which someone from far away talks about a topic of interest to your class or, maybe, asks you a question about your students. Let your students choose from the keypals you have found. Make sure that everyone knows how to subscribe to a list. Make sure that everyone finds an e-pal, and that everyone gets a communication line started. As the semester progresses, prompt your students to engage their keypals in discussion of various aspects of topics and subjects being studied in your class.

Evaluation

By the end of the semester, your students will have gained a better understanding of, and broader perspectives on, the topics and subjects covered in your class because they will have absorbed the perspectives of their e-pals and keypals. They will have experienced reading the authentic writing of other people. They will have written their own ideas in cogent and meaningful

ways that were efforts at being understood by respected peers, rather than just mere school exercises. They may have developed friendships that span miles and oceans and may stand the test of time.

Once your students have keypals, you and they can study geography by pinpointing the locations of e-mail correspondents. Suggest that your class make a "country collection" (and a "domain collection," too) by looking at the suffixes at the end of each e-mail address. You can study language arts by looking at speech patterns, letter composition, spelling, and effective ways to convey an idea to other people. Your students are accustomed to having you correct their writing in terms of its content, cogency, organization, grammar, syntax, and spelling. Ask them, now, to pass judgment on the writing of their e-buddies—not that your students will necessarily remark to their e-pals and keypals on their English usage. If your class partners with a class of kids overseas learning to speak English, however, your students can have great fun—and learn more language skills than ever before—by being ESL teachers and teaching the other kids better American English. Your kids, in turn, might start learning another language.

Another good e-mail project is the "Travel Bear." This takes a bit of time to set up, but the rewards are great. You need to arrange a set of classes where you can virtually send your "travel bear." On allotted days, when the "travel bear" arrives at a particular class, that class takes him on a tour of the town and writes an adventure for the travel bear. The tour and the account of the adventure gets sent to all the classes in the travel loop. By the time the "travel bear" comes home from his trip, he has visited with several different classes, maybe in different countries, and he has a story from each place. These stories can then be published in your classroom and read by everyone. Also, you can follow up on the stories by writing to the classes in the travel loop, asking questions and finding out more details, as well as tracing his route on a map. It's a lot of fun to see where the travel bear is going next!

Since I work with a lot of classes, I find that each time we do an e-mail project we need to have some definite guidelines, or the conversation will wither. Develop a worksheet that lets your

students write the e-mail message before they send it. Have a buddy check the e-mail message for any type of errors. Then, have the students type the e-mail message before sending it online. Keep track of these drafts as it keeps your students accountable. Of course writing and proofreading practice are always useful.

In addition, if you are doing an ongoing e-mail project, have students keep a log of whom they are writing including name and e-mail address, topic, letter and response. It's a diary that tells where they have been and what they have been doing. It's a good way for your students to keep track of the conversation too.

Lastly, you have to maintain your interest in e-mail in order to keep a project ongoing. Therefore, post a weekly topic for e-mail discussion and have your students write at least one letter on that topic to their e-pal. At the end of the week, discuss what your students have found out about that topic. Think about topics that your students would like to discuss and use them. I also like to take a topic that shows up in the headlines and use that as a point of discussion. When you get several classes across several states talking about one topic, your students get to see the value of looking at an idea from different perspectives.

The last and maybe most important aspect about e-mail is its uncanny ability to level the playing field. With e-mail you do not have any prejudices. You do not know who is writing to you, you have no idea about color or race. You are just writing an e-mail message to someone and someone is responding to you. This can go on for many, many letters before you find out that this person is "green with pink spots" and you are not supposed to like green people with pink spots . . . but by then it's too late, as you do like that person.

You and your class can engage in cross-cultural communication, explore others' points of view, learn about distant countries, and expand your minds and hearts to awareness of other people's holidays, celebrations, clothing styles, food, hobbies, hopes, and loves. Your kids will be fascinated to find out the similarities and differences of other kids' lives, their parents and siblings, who lives in the household, and what other kids do for spending money. Try communicating with a class in a different time zone or hemisphere. They might learn why time zones are important and why the seasons are different in different parts of the world.

The number and styles of lessons you can do involving e-mail are limited only by your own and your students' imaginations. Use e-mail and list participation at all grade levels. Let your lesson-planning creative juices flow, and you and your students will discover that your own classroom is the center of the universe.

Chapter 8:

A Whale of a Time!

Marine mammals fascinate kids. They want to give the creatures humanlike qualities and characteristics because these mammals "look intelligent" and seem to have a language of their own. Kids feel the need to both communicate with these amazing creatures as well as save them from harm. So they want to "Free Willy" and swim with Flipper.

There are many Web sites devoted to whales, dolphins, seals, sea lions, elephant seals, sea otters, polar bears, walruses, manatees, and the other marine mammals. This chapter contains a lesson to help you refine your Internet techniques while simultaneously teaching about these remarkable marine mammals.

The learning plan I'm using in this book can be summed up as "both at the same time." I offer you a way to teach both content and method, both subject matter and Internet skills at the same time. Learn all about marine mammals while learning how to become a better Web walker.

If you want to, review Chapter 1 to remind yourself of the basics of the Web and how your browser functions. Revisit the searching exercises proposed in Chapter 4, but this time search for "whale" and "marine mammal." How many hits did you get? This should give you a good start. Listed below is a lesson with relevant URLs that will let you carry your whaling a bit further.

In Your Classroom

Marine Mammal Database

Goal

To develop a better understanding of the characteristics, habitats, and aquatic adaptations of marine mammals, while furthering your understanding of your Web browser.

Rationale

Many kids think that marine mammals are among some of the world's most interesting creatures. They are among the largest animals on earth, and their lives are full of contradictions. They live in the ocean yet they breathe air; they communicate quite effectively using tweets, whistles, clicks, grunts, moans, and other sounds that reverberate through both air and water, yet we cannot understand them; they look and swim like fish, yet they are not fish. Marine mammals might be a window on what makes "man" human, and "animal" not human.

As your students learn about marine mammals, their habitats, and how they communicate with one another, include in your lesson plan the attempts humans have made to communicate with marine mammals and to save them from extinction. Have them imagine what the world would be like if these magnificent mammals were extinct.

Objectives

- Students will search the Web for information on marine mammals.
- Students will create a database highlighting habitat, characteristics, life span, pictures, and literature/writing/books/stories about marine mammals.
- Students will discuss similarities and differences among the various types of marine mammals.

- Students will explain the ways humans have tried to protect marine mammals from extinction.
- Students will create a report to deliver the information to classmates.

Procedures

Set the stage by showing pictures of marine mammals to heighten your students' interest. Brainstorm with your students about what they already know about marine mammals, using a K-W-L chart like the one pictured below:

K-W-L about Marine Mammals		
What do I **KNOW** about Marine Mammals?	What do I **WANT** to know about Marine Mammals?	What have I **LEARNED** about Marine Mammals?

Make at least two versions of the K-W-L Chart: a larger master chart to hang in your classroom and a smaller one for each group of students. During the first session, your students will fill in the first two columns of the master chart. As it fills up with information, everyone can see exactly what they are learning.

Using the big K-W-L chart as a guide, have your students develop their own K-W-L charts for a marine mammal that particularly interests them. They can choose from a wide variety of fields of information, including—but not limited to—the following: habitat; characteristics of a particular species; characteristics of individual marine mammals; pictures of marine mammals; impact of the Marine Mammal Protection Act on specific groups and habitats; various marine mammals in stories, books, and poetry; scientific articles and reports about marine mammals;

communication techniques of various species; human attempts to communicate with marine mammals; and, human uses of marine mammals hunting and harvesting.

After your students have completed gathering their information and developing their group K-W-L charts, these charts form the basis for creating a report to the class on the marine mammal(s) they have learned more about. This report can involve the creation of a Web site, a closed-circuit television production, a panel debate, or an oral report. From the K-W-L charts a comparison/contrast chart can be developed to show similarities and differences among the various marine mammals.

From all the information gathering and presentations, a class database can be amassed on marine mammals, making the collected information readily accessible. Using a database program, such as "Claris Works" or "Microsoft Works," key the charted information in the various categories, where it can be easily revised, expanded, corrected, and reformatted. A sample Marine Mammal Database is found at the end of the chapter. This database can then be transferred to a set of Web pages that can be used for future reference, not only by your class, but by others. The database also becomes a substantial basis for filling in the third column on the big K-W-L chart: "What we LEARNED."

Evaluation

The several individual and group K-W-L charts, and the in-class presentations made in reference to them, form one basis of assessment. Look at the sample evaluation rubric for this lesson (at the end of the chapter), and notice that it focuses on four areas: Content, Internet Experience, Mechanics and Cooperation.

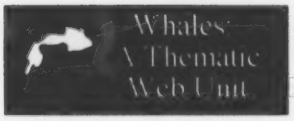
Use the big K-W-L chart as a class equalizer—having made sure that everyone took part in contributing to the big chart. Collaborative effort ought to result in greater results than merely individual effort. Make sure that it does!

This unit on marine mammals may be the first solo Web walking that your students have done. Help them get started, if they have trouble. To help *you* get started, check out the URLs below. In fact, you might want to set up the bookmarks on your browser to include these Web sites.

"A Full Net"

Whales: A Thematic Web Unit

http://curry.edschool.Virginia.EDU/go/Whales/



From the University of Virginia, this is an Internet-based thematic unit of study that spans several areas of the curricula, each focusing on Whales.

The Virtual Whale Project

http://fas.sfu.ca/cs/research/Whales/

A three-dimensional Web site environment with animation and sound, developed to showcase the feeding behaviors of Pacific Humpback Whales.

The Great Whales

http://explorer.scrtec.org/explorer/desc/783750390-447DED81.html

A (Mac only) hypercard stack you can download that contains information about every type of whale known to humanity.

The Whale Information Network

http://www.webmedia.com.au/whales/whales6.html

An Australian Web site that has whale facts, whale history, and plenty more.

The Whale Watcher Expert System

http://vvv.com/ai/demos/whale.html

At this Web site, you can learn how to identify different varieties of whales.

Sea World Marine Mammals

http://www.bev.net/education/SeaWorld/infobook.html

You can find a list of links to most marine mammals at this site. The information is geared to kids. Each of these sites has links about physical characteristics, scientific classification, habitat, food and feeding, gestation, sleep, and social structure, for particular marine mammals. A few links are listed below:

Bottlenose Dolphins
http://www.bev.net/education/SeaWorld/bottlenose_dolphin/bottlenose_dolphins.html

Killer Whales
http://www.bev.net/education/SeaWorld/killer_whale/killerwhales.html

Manatees
http://www.bev.net/education/SeaWorld/manatee/manatees.html

Walrus
http://www.bev.net/education/SeaWorld/walrus/walrus.html

Baleen Whales
http://www.bev.net/education/SeaWorld/baleen_whales/baleen_whales.html

Marine Mammal WWW List

http://elpc54136.lboro.ac.uk/links.html

A comprehensive list of links to other marine mammal Web sites.

Bill Lemus' List of Links

http://www.rtis.com/nat/user/elsberry/marspec/ms_blem.html

Considered one of the best sources of Web information on marine mammals with too many Web sites to count. Many of the links have marine mammal pictures as well as text.

Marine Mammal Protection Act

http://kingfish.ssp.nmfs.gov/tmcintyr/mmpahome.html
(for the 1972 MMPA)

http://kingfish.ssp.nmfs.gov/tmcintyr/mmpatext/mmpacont.html
(for the 1994 amendment to the MMPA)

Careers in Marine Science

http://www.rtis.com/nat/user/elsberry/marspec/mmstrat.html

If you have students who want to become marine biologists, this is the Web site for them.

Charlotte, The Vermont Whale

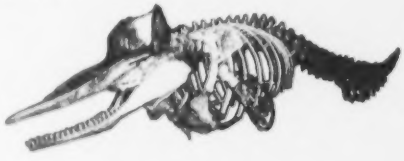
http://www.uvm.edu/whale/whalehome.html

In 1849 the bones of a mysterious creature were found in Charlotte, Vermont. The bones were from a fossilized whale skeleton. Information about this ancient whale is at this Web site.

The Sperm Whale Project

http://www.alaska.net/~pratt/index.htm

Find out what happens when a dead sperm whale washes ashore in Alaska.



The Wild Dolphin Project

http://wwwa.com/dolphin/index.html

An information source for the Atlantic Spotted Dolphin.

The Mediterranean Monk Seal
http://www.weburbia.com/pg/seal.htm

Information and resources on the monk seal.

The Polar Bear and the Walrus
http://www.teelfamily.com/activities/polarbear/

A Web page written for homeschoolers to learn more about these two marine mammals.

The Foutch Virtual Zoo: Polar Bears
http://home.sprynet.com/sprynet/jfoutc01/polrbear.htm

Find pictures and information about polar bears.
To see the Foutch Virtual Zoo home page go to **http://home.sprynet.com/sprynet/jfoutc01/virtualzoo.html**.

Teaching resources for teachers, Learning resources for students

Many ready-made lesson plans about marine mammals are downloadable from the Internet for your immediate classroom use. You and your students can find them at these URLs:

Dolphin Documentary
http://www.bev.net/education/SeaWorld/bottlenose_dolphin/k3activitydol.html

A K–3 one-day lesson plan about dolphins.

How Big Is a Blue?

http://www.bev.net/education/SeaWorld/baleen_whales/howbig.html

A one-day lesson on measuring and comparing sizes of whales.

Orcas

http://www.bev.net/education/SeaWorld/killer_whale/nowhearthis.de.html

A K–3 lesson on the hearing capacity of Killer Whales.

Bottlenose Dolphin: Latin Lingo

http://www.bev.net/education/SeaWorld/bottlenose_dolphin/48activitydol.html

A 4–8 lesson that explains the scientific naming of dolphins. If you are working on root words and Latin derivatives, you can use this good location.

Seals, Sea Lions and Walruses

http://www.bev.net/education/SeaWorld/Pinnipeds/introduction.html

An integrated set of lessons for K–3 students that weaves geography, literature, and the biology of seals, sea lions, and walruses.

Pick Your Animal!

Now you know what the Web can do for you as a teacher, but only on one narrow range of topics: marine mammals. The world is a zoo, and we are but a few of the critters in it. Use the search engines, adapt the learning strategies suggested here, pick your own favorite critter and let your students pick theirs. Then Web walk bravely to discover further information and more activities, instructional ideas and strategies that suit your style of teaching and your students' inclinations. All you have to do is click on your favorite search engine or directory to find Web pages about Ornithology, Farm Animals, Amphibia, and the like. Search for "Zoo Animal" or "African Animal" if you want a place to get started (remember not to search for plural words as it confuses the search engine). You'll be amazed at how many different creatures inhabit our world, and how much you can find out about them on the Internet. This must be what they meant when they said: "Learning is fun."

Sample Marine Mammal Database

Marine Mammal	Picture	Habitat	Life Span	Books/Stories	Diet	Characteristics
Baleen Whale						
Blue Whale						
CA Grey Whale						
Humpback Whale						
Right Whale						
Toothed Whale						
Killer Whale						
Minke Whale						
Pilot Whale						
Sperm Whale						
Dolphins						
Atlantic Dolphin						
Bottlenose Dolphin						
Spotted Dolphin						
Seals & Sea Lions						
Elephant Seal						
Harp Seal						
Sea Lion						
Dugong						
Manatee						
Polar Bear						
Sea Otter						
Walrus						

This database can be made into a Web page. By clicking anywhere on the matrix, you can find information about each of the marine mammals listed. Please note that this is not an exhaustive database on marine mammals!

Evaluation Rubric for "A Whale of a Time!"

Assessment Area	Exemplary	Proficient	Not Yet
Content	• Detailed & interesting information • Personal insights included • Relevant to students • Well written report • Positive addition to the database • Creativity shows in report • Shows initiative • Clear ideas • Well organized	• Less detail • Added database information • Completed KWL • Followed directions • Ideas less clear • Some detail, but organization wanders	• Not detailed • Did not complete database or KWL • Did not participate with others • Did not follow directions • Unclear ideas • Unorganized and boring
Internet Experience	• Searched many useful Web sites • Used traditional and electronic research tools • Used e-mail, listservs and newsgroups to find information • Wrote HTML for database	• Searched limited number of Web sites and traditional resources • Limited bibliography	• Searched one Web site • Only used one type of information source
Mechanics	• Excellent grammar, punctuation • Report is easy to read and follow	• Good grammar, punctuation and spelling • Errors do not "get in the way" of the story line	• Faulty grammar, punctuation and spelling • Report is difficult to read because of errors
Cooperation	• Students worked well together • Students shared the work load fairly • Students solved problems in a fair manner	• Students worked together with little strife • Burden of work done by small part of the group • Students solved most problems in a fair manner	• Students did not work well together • Burden of work done by one member of the group • Teacher intervention was needed to solve problems

Chapter 9:

The CyberNews

It's hard for some kids to become interested in state, national, and international news or current events. They do not yet grasp how world events effect their daily lives. Their sense of caring about people they do not know personally has not developed. Kohlberg and Piaget would say their processes of moral development are incomplete. Another cause of students' lack of connection with a world bigger than their own wants and needs is that the network news programs do not attempt to reach young people. The advertisers aim at selling their products to older folk—they know who's watching. The news on PBS is all talking heads, slow-moving, and cerebral; the news on the commercial networks is more colorful, more active, and with more human interest, but little is offered to attract the attention of anyone still in school.

So I started thinking about how to make the news less boring and encourage kids to become better informed by including the Internet in the equation. The Internet offers action and color like a television broadcast, but—unlike TV—the Internet is not a passive medium. The Internet activates the brain, while TV dulls it. Hands-on Web walkers don't just sit there and watch; they interact.

ESPN SPORTSZONE

There is more to news than just politics or street violence. There is Sports, which can be accessed through a multitude of sites on the Internet, such as ESPN SportsZone (**http://www.espn.sportszone.com**). I believe in

trying almost anything to get my students hooked on the news, be it sports, wars, crises, human interest, elections, ecology or whatever. Current events are important, so I pull out all the stops to prove that they are interesting, and the Internet can help.

The Internet is up-to-date because news on the Internet comes in real time. People who spend lots of time online regularly exploit the Internet for its news-gathering potential. Not only can you tap the usual resources such as CNN (**http://www.cnn.com**) or MSNBC (**http://www.msnbc.com/**), but also you can quickly find information from less commercial sources such as e-mail, lists, and newsgroups.

In class, you can use the Web to access the news on the Internet. Yahoo, News (**http://www.yahoo.com/headlines/**) has headline news updated regularly. You can read the AP Wire at **http://www1.trib.com/NEWS/APwire.html**. It is regularly updated. You can make news-gathering a daily part of your curriculum; you can build a news perspective into any thematic unit that you teach; and, you can make learning how to find the news, read the news, and understand the news as part of your instructional learning via the Internet. Once they get hooked, you will have created a few more news junkies, but that's the risk you run.

In Your Classroom

Read the CyberNews!

One way to get your students involved with the news is to have them publish their own weekly CyberNews or stage their own news broadcasts. If you want them to work on reading and writing skills, set up a news publishing organization in your classroom. If you want them to work on oral communication skills, have them produce and perform CyberNews broadcasts. At the stage when they use the Internet for news-reading, news-gathering, news-understanding, and news-summarizing, the process is essentially the same, whether ultimately they will present their results in print, in person, or online.

To set up your CyberNews Bureau (CNB), brainstorm with your students about what departments will be required. Local, state, national, and international news departments come to mind, but you might want to have specialized departments such as sports, music, fashion, comics, gossip, weather, lifestyle, and human interest. This is also a chance to include an editorial department, featured columnists/commentators, and even letters to the editor from the readers.

Let your class divide itself up into teams of Internet reporters, one team for each major department. Their tasks are to find items from the various news sources; Internet as well as traditional print and video variety. They need to understand and interpret what they find, and then report (write) their own news stories. (Whether they produce a newspaper or a broadcast, they still need to write copy.)

The means of publication are up to you, your students, and the technical capabilities at your disposal. Your class could sponsor a weekly news broadcast over the school's P.A. system. If you have closed-circuit TV in your school, you could prepare a TV news program for broadcast regularly (once a month). You could publish your class' own newspaper for distribution to school mates, parents, and neighbors. Or you can print a CyberNewspaper, and put it on the Web electronically. The possibilities are endless!

Goals

- To gain a better understanding of current events, their local and global impact.
- To learn how news is gathered and prepared for release to the public.
- To learn how to produce a newspaper or a news broadcast.
- To learn personal, intellectual responsibility in communicating matters of import to other fellow human beings.

Rationale

Young people need to know that they are not isolated but part of a larger sphere of interest and influence that encompasses the world. By expanding their horizons, so that they think about how local, state, national, and international events all work together

to "make the world go around," your students will become more active members of their global community.

Objectives

- Students will read and gather news stories from traditional and Internet sources for the purposes of reporting this information to the class.
- Students will write articles based on the news they have gathered.
- Students will publish the news in a format that has been selected as best for the class.
- Students will maintain their CyberNewspaper on a regular basis either by publishing new editions or updating the CyberNews Web page for the class.

Procedures

Whet your students' appetites for news by asking them what events of the last week really caught their attention or sparked their imagination. Discuss those items and then list them on the board or overhead transparency so that they look like the headlines of a newspaper. Tell your students that for the next semester (or however long you want the unit to last), they are going to be reporters and anchors, working on the school news. They will be telling the main events of the week in some of the categories previously listed and offering their editorial opinion on the news they are presenting, following the cues found in network news programs or in Web-based news pages.

Explore the various news resources available to them—newspapers, news magazines, radio, television, and the Internet—not to forget their own personal reporting of the local news. Have your class divide itself up according to individual interests into the various news departments.

To create a CyberNewspaper to put on the Web, you will need a staff of people who can do the following:

- **Editors** who are responsible for topics that need to be researched for the CyberNews. Editors are responsible for timelines and deadlines on stories.

- **Reporters** who are responsible for researching the topics and writing the stories before the deadline. They are responsible for seeking related Web sites to enhance each article in the CyberNews.
- **Co-editors** who are responsible for researching the topics and editing the stories for accuracy of facts and grammar. Once the stories have been edited, they need to be rewritten by either the reporters or the co-editors.
- **Artists** who are responsible for creating or finding artwork that fits the edited stories.
- **Layout designers** who are responsible for the "look" of the CyberNews. They are the people who decide background color for a Web page and positioning of graphics and other artwork.

If you are going to put your editions of CyberNews on the Web, then you will need the following:

- **Coders** who are responsible for HTML coding the edited stories.
- **Proofers** who are responsible for proofreading the HTML coding for errors and correcting the errors.
- **Webmasters** who are responsible for submitting the CyberNewspaper to your local Internet Service Provider (and/or to Discovery Channel School if you wish). They are responsible for reporting on how well the CyberNews Team collaborated.

Evaluation

The newspaper or broadcast that your students produce will be the tangible result of this learning process. There is a CyberNews Rubric included at the end of this chapter that looks at the following topics: ideas and content; organization; mechanics; arts/graphics; and, cooperation. In the long run, look to see if your students have learned something about current events and whether they can carry on an interesting and informed conversation about the realities around them.

I do not take up space in this book listing the various major newspapers, news magazines, and radio and television sources.

You and your kids have TVs and radios; turn them on to find out what's there; go to the newsstands to see what they offer. Nor do I take up space talking about what to do with your news, once you get it. You may decide to publish a newspaper or broadcast the news. If you do, I hope you take advantage of any number of good books, teacher's guides, and periodical literature on journalism and broadcasting. These can give you ideas on how to address your public and the technology of your chosen medium. I hope that you will decide to post your CyberNews to the Internet. If you do take that route, I enter herewith my subscription to your news service: **cotton@instruction.com**. Thanks!

CyberNewspaper Resources

CRAYON

http://crayon.net/

Although it does not sound like a newspaper, it is. CRAYON is an acronym (of sorts) that stands for CReAte Your Own Newspaper. CRAYON offers supercool methods of styling your own headlines as well as links in the following categories: U.S. News, Regional and Local News, World News, Politics As Usual, Editorials and Opinions, Weather Conditions and Forecasts, Business Reports, Information and Technology Report, Arts and Entertainment, Sports Day, The Funny Pages, and New and Cool Web Sites. CRAYON is an excellent site to learn how to make a newspaper work, a must-see for your students, and a good jumping-off place to find out more information for each of the departments that might be included in your own newspaper.

Newspaper Links

The University of Florida, College of Journalism and Communications

http://www.jou.ufl.edu/commres/webjou.htm

This list of links to commercial newspapers with Web editions all over the world is rich and extensive.

NandO Times

http://www2.nando.net/nt/?low

This site has links to Global News, Stateside News, Sports, Politics, Business, Information Technology, Health and Science, Entertainment, Jobs/Classified Ads, and Editorials.

Current World News

http://www.yahoo.com/headlines/international/

Yahoo provides a summary of international headlines and stories with regular updates.

The Daily News Current

http://www.newscurrent.com/

A compilation of headlines from several leading U.S. newspapers make up this Web site. It's a good summary of the news, and it gets updated once a day at 9:00 AM Pacific Time.

You can read the San Francisco Chronicle and the San Francisco Examiner by going to *The Gate* at **http://www.sfgate.com/**. You can read the *New York Times* at **http://nytimesfax.com/** (you will need Adobe's Acrobat to read this newspaper, however). *USA Today* is online at **http://www.usatoday.com/**.

Sports News on the Net

NandO Sport Server

http://www2.nando.net/SportServer/

This Web site has links to football, baseball, hockey, basketball, and other sports.

The World Wide Web Virtual Library

http://www.justwright.com/sports/

A British Web site that features a built-in search engine, and links to many sports. Sports aficionados will never want to stop reading this book of electronic pages.

American Government

Thomas: The U.S. Congress on the Net

http://thomas.loc.gov/

This Web site (named for Thomas Jefferson) has links to the House, the Senate, the Congressional Record, the Library of Congress, and many other departments that focus on politics and American life.

National Weather Service forecasts

USA Today Weather

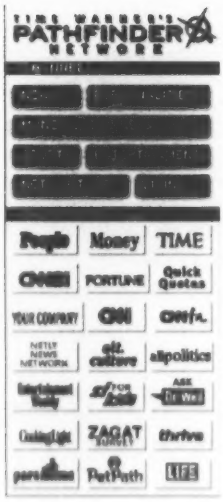
http://www.usatoday.com/weather/wfront.htm

See a copy of the USA Today weather map as well as forecasts for any region in the U.S.

University of Illinois, Urbana Campus

http://www.uiuc.edu/misc/weather.html

For U.S. weather maps, as well as forecasts for every state in the union, this is the Web site to visit. You will find links to the latest weather image of the U.S., current weather maps, weather movies, and a link about earthquakes.



I did not mention news magazines on the Web, because there are so many. However, check out Pathfinder at **http://pathfinder.com/welcome/** which has links to *Time*, and *People* magazines, as well as links to sports, the stock market, travel, kidstuff, music, games, and more.

As you and your students work with the news, you will find many more resources and locations than I have offered here. In my experience, getting kids to become news reporters is one of the best ways to get them to have fun while learning, and to learn something useful while they are having fun.

Evaluation Rubric for "The CyberNews"

Assessment Area	Exemplary	Proficient	Not Yet
Ideas and Content	• Ideas are clear • Lots of details • Holds attention	• Ideas somewhat clear • Some details • Reader can follow most of story	• Unclear ideas • Details are too general and vague • Boring
Organization	• Very good introduction • Smooth, easy pace • Good placement of details • Strong conclusion	• Good introduction • Some trouble following pace • Some details, but out of order • Good conclusion	• Introduction boring • Hard to read • Wanders aimlessly • Stops abruptly or drags on
Art/Graphics	• Reflects research • Follows a plan • Carefully and neatly done • Art/graphics are an asset to the text	• Reflects some research • Shows some planning • Mostly done carefully and neatly • Art/graphics aid the text	• Does not reflect research • Is not planned • Is not done carefully and neatly • Art/graphics harmful to text
Internet Experience	• Used many Web sites to collect news • Daily Web site log entries • Related Web site news to print news in meaningful ways • Published product (Web site) is organized and easy to use • Updates on published product (Web site) occur every week	• Used required Web sites • Web site log entries 3-4 times a week • Used only news from either Internet or traditional media • Published product (Web site) is complicated to use • Updates on published product (Web site) occur once a month	• Used fewer than required Web sites • Web site log entries fewer than 2 times a week • Used news from only one source • Published product (Web site) is incomplete • Updates on published product (Web site) do not occur
Mechanics	• Excellent grammar, punctuation and spelling • Easy to read aloud	• Good grammar, punctuation and spelling • Most parts are easy to read	• Faulty grammar, punctuation and spelling • Awkward to read out loud
Cooperation	• Students worked well together • Students shared the work load fairly • Students solved problems in a fair manner	• Students worked together with little strife • Burden of work done by small part of the group • Students solved most problems in a fair manner	• Students did not work well together • Burden of work done by one member of the group • Teacher intervention was needed to solve problems

Chapter 10:

The ABCs of Canada

A is for Archie, B is for Browser, C is for Computer . . . Alphabet books are among the first texts that little people read, yet they are developed by big people. The idea behind this lesson is for older kids to use the Internet to make an alphabet book for younger kids, and not one based on computer jargon, either.

The chosen topic can represent just about anything, so long as it is broad enough to offer words aplenty to use up the alphabet. An easy ABC book would be on animals. The older kids would already be inclined to start with Aardvark and end with Zebra. The challenge to them is finding information about these critters on the Web. Once they have finished their work, you can arrange for a cross-grade collaboration between, say, your upper graders and the lower graders down the hall or at another school. Sit a couple of older kids and a couple of younger kids in front of the same computer, and let the older kids show the younger kids their bestiary abecedarium, and then let the older kids and younger kids walk the Web together in search of a zoo-full of more animals. The upper graders could teach the lower graders how to browse, and the lower graders could demonstrate what they already know and more.

ABC books are relatively easy to think about if we deal with topics we know a fair amount about already. I want to focus on a topic that might be more difficult, or at least less familiar: Let's make an Online ABC Book of Canada.

Canada, our neighbor to the north, is studied during both middle-school and high-school years, but American study of Canada tends to be inadequate, at best. Most Canadians with a high-school education know infinitely more about the USA than Americans know about Canada. Most Americans don't know, for example, that the U.S. attempted to conquer and annex Canada in 1812, but failed, being beaten back by the Canadians at the Battle of Queenstown Heights. Canadians, you may be sure, know this! And this is only the beginning of American ignorance about "the True North" (as some Canadians call their land). After the typically inadequate study of Canada by American school kids, they still often don't know that Canada is the largest country (in terms of land mass) in the world, yet with a total population smaller than that of California's. Most of us don't know that Canada is divided into provinces and territories, we cannot name them, nor locate them on a map. Most of us don't know that the United States and Canada share one of the longest open, unguarded borders in the world. Only the American tourist to Canada finds out that Canada does not have a dollar bill but a dollar coin, nicknamed "the Loonie." If your students do not yet know this kind of information about our fascinating northern friends and relatives—or about French-speaking Quebec, or the very many Canadian Native North Americans, or the recent migration to Canada of Ukrainians, Hong Kong Chinese, and several other nationalities that help to make up the complex and delightful Canadian national and ethnic mosaic (Canadians speak about a "mosaic" in preference to the American metaphor of a "melting pot")—then it's time to walk the Web to find out about Canada.

In Your Classroom

The ABC Book of Canada

Goals

- To gain a better understanding of Canadians, their land, geography, and government; their culture, history, and ethnic heritage; and their feelings about Americans.
- To begin the assembly of a body of information that will allow students to compare American culture with another culture.
- To examine a culture similar enough to make the comparison interesting, and yet different enough to make us examine on why we are what we are and they are what they are.

Rationale

The Land of the Maple Leaf is America's largest and most important trading partner. One of the two official languages of Canada is English; this means that Americans can speak their own tongue and be understood almost anywhere they go in Canada. Canada is one country to which Americans are likely to travel because it is easier than going to any other foreign country (if Canada is "foreign"). Part of the fun of studying Canada is finding out the ways in which they are "just like us" and the ways in which they are "really different." Because Canada is part of the course of study in U.S. schools, let's use the Internet to help us do a better job of finding out about our cousins to the north. Walk the Web and take a Canadian vacation without leaving home.

Objectives

- Students will gather information about Canada using both online and offline resources.
- Students will compare and contrast Canadian culture with American culture.
- Students will study maps, charts, flags, pictures, and text to collect information about Canada.
- Teams of students will compose an ABC book of Canada to share with another class of students.

Procedures

Set the stage by reading an ABC book to your class and letting them talk about the ABC books that they had "back when they were children." Hold a discussion about the elements of an ABC book. Propose making an ABC book that can be shared with another class. Talk about Canada, activating your students' prior knowledge about Canada and proposing that Canada be the topic of the ABC book. Using the suggestions below, as well as whatever your students themselves find on their own, explore the Internet for information about Canada, relating this to any other information about Canada available from other sources.

Because there is *so much* about Canada on the Internet, an important part of this lesson will be learning to discriminate among sources: avoiding redundancy; selecting the best sources available; and, finding specific, desired information. The Internet represents a major attack of information indigestion—we are all overwhelmed by it, like having eaten Thanksgiving dinner, Christmas dinner, and a New Year's Eve banquet all at once. Information management vis-à-vis the Internet is a whole new skill and is becoming a whole new profession.

First, suggest that your students use the strategies in Chapter 7 to find keypals in Canada. These direct connections with real Canadians will be one excellent way to test firsthand the archival information that your students will discover on databases. Because most Canadians speak English, an e-mail connection with Canadians is easy and should be great fun.

Then, start the Web-walking part of the task. You may want to divide your class into several groups, each group working on a different section of the alphabet book. You may also want the groups to be responsible for a segment of the alphabet, such as A–E, F–J, K–O, P–T, U–Z. (or because A–E is inherently easier than U–Z, you might want to mix the letters up: Group 1: A, F, K, P, U; Group 2: B, G, L, Q, V; Group 3: C, H, M, R, W; Group 4: D, I, N, S, Z; and Group 5: E, J, O, T, Y, Z.) When the Internet work has been completed, your students need to lay out the book and make it ready for publication. After it is published, partner your class with a class at a lower-grade level so that your students may share their information about Canada with the younger kids. Before the cross-grade collaboration, give your students some guidance on what to expect from the younger kids: how to relate to them; how to share the book with them; and, how to let them enjoy the book. This may be your students' first lesson in teaching; the teacher's job is not to show off but to facilitate the learning of the student. The learner's joy in finding out and knowing is greater when they've done it mostly on their own.

Evaluation

By compiling the several groups' work, your class can produce a full ABC Book of Canada for sharing with another class. The process of bringing the various parts and pieces together can become a beneficial formative assessment. Each group can evaluate their own and others' work individually and in relation to the whole. Decisions will have to be made about what to include and exclude; what the balance, style, focus, look, and feel will be like; and, the specifics of typography and book production. You can make this book as simple or complex as you and your students like. It can take whatever physical form you choose—certainly an online computer document, but also a printed-out hard-copy edition with pictures, graphs, charts, prose, facts, maps, stories, and whatever else your students want to include. One major proof of the pudding will be in how well your class project goes over with the students' younger partners; the kids in the class down the hall. The standard of assessment and evaluation during this phase needs to be the younger kids' reception and enjoyment of your "ABC Book of Canada." After the cross-grade presentation, engage your students in a discussion of how it went with the other class. Remind your students of the points you will have

made in preparing them to work with the younger class (see "Procedures" above), and use those suggestions as a check list against which to evaluate the collaborative experience. This evaluation will be a self-assessment conducted by your students of their own work for the younger students.

Visit Canada via the Internet

Yahoo: Canada

http://www.yahoo.ca/

Yahoo has it's own Web site on Canada. From this directory you can find information on each province and territory. This is probably the first site to visit to get an idea of the scope of information that is available.

The Flags and Arms of Canada

http://www.cs.cmu.edu/afs/cs.cmu.edu/user/clamen/misc/Canadiana/CA-Flags.html

Get a look at the flags and coat of arms for each province and territory.

About Canada

http://canada.gc.ca/canadiana/cdaind_e.html

Learn many facts about Canada in either French or English. This governmental site is part of the Primary Internet Site of Canada at **http://canada.gc.ca/main_e.html**.

Symbols of Canada

http://canada.gc.ca/canadiana/symb_e.html

The Web site to learn about the meaning of the emblems and symbols of Canada.

Federal Links

http://canada.gc.ca/depts/major/depind_e.html

An alphabetical listing of links to every department in the Canadian government.

CIA Fact Book of Canada

http://www.odci.gov/cia/publications/nsolo/factbook/ca.htm

A text-only page that tells you about the geography, economy, people, and everything else about Canada. You can view a map of Canada here at **http://www.odci.gov/cia/publications/nsolo/factbook/map-gif/ca-150.gif**.

Canadiana: The Canada Resource Page

http://www.cs.cmu.edu/afs/cs.cmu.edu/user/clamen/misc/Canadiana/README.html

A general information page with links to news and information, facts and figures, travel and tourism, government, politics and history, science and education, technology, heritage, culture and entertainment, and finally general links. This is a huge Web site.

Defacto: Geographical Facts About Canada

http://www-nais.ccm.emr.ca/defacto/

This Web site reads like a trivia game. Where is the longest river in Canada? How many lakes are there in Saskatchewan? Each paragraph is written in English and French.

Tour of Canada Without Leaving Your Desk

http://www.cs.cmu.edu/afs/cs.cmu.edu/user/clamen/misc/Canadiana/Travelogue.html

All the links you need to see, hear and read about Canada. This Web site is a good source for alphabetical information.

Canadian Government Information on the Internet

http://library.uwaterloo.ca/discipline/Government/CanGuide/

Leads you to information about the peoples, provinces, and territories of Canada.

The Canadian Press

http://xenon.xe.com/canpress/Overview.html

It's always wise to know the news, so click here to see it from the Canadian perspective.

Natural Resources Canada

http://www.NRCan.gc.ca/
(home page)
http://www.NRCan.gc.ca:80/home/page2_e.htm
(English page)

Click on any of the icons and be transported to one of the various departments that deal with Canadian natural resources.

Weather from Environment Canada

http://www.doe.ca/weather_e.html

Here you can get weather forecasts for every area of Canada, as well as maps, charts, and satellite imagery. In Canada, temperatures are shown in degrees Celsius, not Fahrenheit. This would make a good exercise for converting one temperature system to the other.

To start your students thinking about Canada in terms of the ABC's, I have provided a sample ABeCeDarium and quiz. Each letter features a question, and they can Web walk the Canadian sites mentioned above to find the answers, filling out the URLs as proof of their discoveries. After they have practiced using this page, it's their turn to make up their own twenty-six letter ABeCeDarium.

An ABC book of anything provides a fun way to learn, no matter what topic you choose. It is a natural way for your students (no matter what grade level) to write and draw their knowledge and share that knowledge with someone else. The ABC approach allows your students' minds to rove widely and gather the fragments of information needed to give factual substance to "in-depth" discussions. As you and your students visit Canada on the Internet, discussion opportunities will arise. This is your chance to develop higher-order thinking skills that have been based on the information found in an ABC book. If your students are like many I have worked with, they will soon be producing ABC books on all sorts of topics.

A Sample Internet ABeCeDarium of Canada

A is for Aleut—http://
How many Native Canadian peoples can you name?

B is for Banff—http://
Where is Lake Louise?

C is for Calgary Stampede—http://
Who does the stampeding?

D is for Dogwood (provincial flower of British Columbia)—http://
Where is British Columbia?

E is for Elizabeth the Queen—http://
Is the Queen of Engiand still the Queen of Canada?

F is for French language—http://
How many people speak French in Canada?
How many people speak Ukranian and other non-English languages?

G is for Gaspar Bay, Nova Scotia—http://
How cold does it get in the northern parts of Canada?

H is for Hudson's Bay—http://
What was the Hudson's Bay Company, and for whom was it named?

I is for Inuit—http://
Now how many native Canadian peoples can you name?

J is for Jasper National Park—http://
Do Canadians or Americans do a better job of taking care of nature?

K is for Kingston, Ontario—http://
Who named Kingston and why?

L is for Loonie—http://
What's a loon?

M is for Maple Leaf Flag—http://
What else in Canada is called "the Leafs?"

N is for Niagara Falls—http://
Half of Niagara Falls is in Canada; where is the other half?

O is for Ottawa—http://
Can you name all of the provinces and their capital cities?

P is for Parliament and the Prime Minister—http://
How does Canadian government differ from American government?

Q is for Quebec City—http://
Quebec City is the only walled city in North America and the capital of New France. What else is called "Quebec?"

R is for Regina, Saskatchewan—http://
Who was the Regina they had in mind when they named the town?

S is for Saint Lawrence Seaway—http://
From where and *to* where and *between* where does it run?

T is for Toonie—http://
This new coin rhymes with Loonie. What does it stand for?

U is for Union Corner Provincial Park, P.E.I.—http://
What are the Maritimes?

V is for Victoria Island, B.C.—http://
Where does America stop and Canada start? What is the Pig War?

W is for Winnipeg, Manitoba—http://
The name "Winnipeg" derives from what language?

X is for xenophobia—http://
What is the basic Canadian attitude toward foreigners?

Y is for Yukon Territory—http://
Gold fever! What can you find out about the American gold rush into Canada?

Z is for Zones—http://
How many time zones does Canada have, and how do Canadians write the zip codes that indicate their postal zones?

ABC Web Site Reference Chart

Names: _____ Date: _____

Today we viewed the following Web sites for the ABC book:

http:// _____ Title: _____

http:// _____ Title: _____

http:// _____ Title: _____

http:// _____ Title: _____

http:// _____ Title: _____

We plan to use the following Web site for information on the letter _____ :

http:// _____ Title: _____

We plan to write the following information on that letter:

_____

_____

_____

We plan to use the following Web site for information on the letter _____ :

http:// _____ Title: _____

We plan to write the following information on that letter:

_____

_____

_____

This information should be completed for each letter used by each group.

Evaluation Rubric for "The ABCs of Canada"

Assessment Area	Exemplary	Proficient	Not Yet
Content and ideas of the book (or Web site)	• Ideas are clearly presented • Content follows ABC order • Each listing has an excellent explanation • Each listing has a URL reference	• Ideas are somewhat clear • Content follows ABC order • 1–3 alphabet listings are missing • Each listing has a good explanation • Some URL references missing or incomplete	• Ideas present are unclear • Content not in order • Many letters are missing • Listings are unclear • Most references are incomplete
Layout of the book	• Excellent use of graphics • Excellent use of white space on page to make reading of the book easy	• Good use of graphics • Good use of white space so the reader wants to read the book	• Little or no use of graphics • Pages are cramped making it difficult to read the book
Sharing the book with another class	• Excellent rapport with other students • Very patient when working with younger students; answered all questions and concerns with ease	• Good rapport with younger students • Patient when working with younger students	• Reluctant to share with younger students • Impatient when working with younger students
Internet Experience	• Used many different Web sites to find the best information • Contacted Canadians on e-mail to get firsthand information • Used excellent search strategies • ABC Web site reference charts are up to date • Relied on three to four Web sites to find information	• Relied on three to four Web sites to find information • Wrote e-mail to one Canadian to obtain first hand information • Used good search strategies to find information • ABC Web site reference charts are used regularly	• Obtained information from one Web site • Did not utilize e-mail to contact a Canadian • Search strategies were not used effectively • ABC Web site reference charts were kept irregularly
Mechanics	• Excellent grammar, punctuation and spelling • ABC book is easy to read and follow	• Good grammar, punctuation and spelling • Errors do not "get in the way" of the story line	• Faulty grammar, punctuation and spelling • ABC book is difficult to read because of errors
Cooperation	• Students worked well together • Students shared the work load fairly • Students solved problems in a fair manner	• Students worked together with little strife • Burden of work done by small part of the group • Students solved most problems in a fair manner	• Students did not work well together • Burden of work done by one member of the group • Teacher intervention was needed to solve problems

Chapter 11:

Virtually Together in D.C.

In all elementary, middle, and high schools, students in the U.S. study American government. Many schools sponsor trips to Washington, D.C. every year for selected fifth-, eighth-, and eleventh-graders. Before your students take their actual trip to Washington, D.C., however, I suggest that they (and you!) go on a virtual tour of the city. If your school does not provide for such a trip, that's an even better reason to take this cybertour.

The Internet sources that make a virtual trip possible will also make Washington more interesting and meaningful when your students actually arrive there. The following Internet-based tour guide to D.C., will prepare your students for the real geography, history and grandeur that they will encounter in our capital city.

In Your Classroom

A Virtual Tour of Washington, D.C.

The first time my mother visited Washington, D.C., she made a startling discovery: The White House and the Capitol were two different buildings in two different locations. She was surprised! Somehow, despite news broadcasts about what the President had said at "the White House" as opposed to what Congress had done "on the Hill," the two had coalesced in her mind.

With this lesson, you can familiarize your students with the map of Washington, D.C., as well as with the significance of many of the buildings, monuments, and other landmarks that make Washington the living, open history book of America.

Goals

- To give students a better understanding of the geographical layout and historical relevance composition of our nation's capital by taking a virtual tour.
- To help them understand our system better by experiencing the real-estate of government.
- To get them ready and eager to go to Washington.

Rationale

Washington, D.C., is the seat of the American national government. When students know the significance of the various official edifices, they tend to develop a better understanding of our country, our history, our leaders (past and present), and our representative democracy. When students have an idea about the nature of the U.S. Government, the location of the seat of power, and can put a face to famous people and recognize important buildings, they gain a better understanding of what it means to be an American.

Objectives

- Using map skills, students will locate the nation's capital, points of historical interest in the city and determine the best route to travel to get to the City.
- Students will be able to explain what takes place at each site, and the meaning for America of the following public edifices: the White House, the Supreme Court, the Capitol Building, the Smithsonian Institution, the Treasury, the Library of Congress, the Lincoln Memorial, the Washington Monument, the Jefferson Memorial, the Vietnam Memorial, etc.
- Students will determine ten places they want to visit in Washington, D.C., explain in writing why they want to visit them, create a personal tour-map of Washington, D.C. describing the tour that they want to take, and create a bookmark tour that they will show to the class.

Procedures

Set the stage by telling your class that they are going on a trip (either a real, or virtual or both) to Washington, D.C. While they are thinking about the trip they are going to take, hold a brainstorming session to determine what your students already know about Washington, D.C. Prepare a semantic map that has Washington, D.C. in the center, then create branches for each piece of information your students give you about the City. Show your students photographs, post cards, and/or videos of Washington, D.C. Share with your students books, travel guides, articles and Web sites on Washington, D.C. After this, they should be ready for their virtual tour, which will prepare them for an actual tour they might take.

Using the bookmarks at the end of this lesson, challenge your students to locate ten people, places or things they want to visit. Then they can prepare a group set of Washington, D.C. bookmarks which will allow the class to take a virtual tour of the special sites they want to see. As usual for these exercises, your students should work in small groups and the groups need to

decide how to work in harmony. Each day your student groups are online, they should complete a site log relating the Web sites they visited during that Internet session, the Web sites they selected for their bookmark list, and the reasons why they selected those sites. Resourceful students may be able to tell you about the National Arboretum, the National Gallery, the exhibits at the Library of Congress, or they will find other sites of special interest to themselves. At the end of the desired time, your groups of students will have chosen the ten places they want to visit, written a paper explaining why they want to visit those places, and will have prepared a set of bookmarks for a virtual tour that other members of the class can take. As a culminating activity to share the bookmarked virtual tours, have each group of students select three to five "favorite places" they want to visit in Washington, D.C. Have them present their virtual tour for their classmates, showing and explaining the places they want to visit, and telling why those places are significant to them and to the country. If each group in your class selects three different sites, they will have organized a thorough virtual tour of the city to prepare them for the actual tour-to-come.

If you are going on an actual trip to Washington, D.C., you might want to include a section on the economics of lodging, meals and transportation. This adds another facet to the lesson, one that is most important: budgeting time and money.

You and your students will find many more Internet sites on Washington than I have provided. To go along with what you can discover via the Internet, use other electronic library resources, such as Encarta, a CD-ROM program with a lot of great information about Washington, D.C.

For a thought-provoking, optional capstone project, propose that each student design his or her own D.C. monument, draw a sketch of it, and be ready to explain the following to the class: what it would look like; what it is; where it would be located in D.C.; and, what it means.

Evaluation

By the end of the virtual tour of Washington, D.C., your students will be familiar with several of the important buildings and monuments in the city. Your students should be able to tell you the significance of the various monuments. The evaluation rubric for this lesson (at the end of the chapter) has the following parts: Web site Logs; Ideas, Content and Organization of Virtual Trip Bookmarks; Ideas, Content and Organization of Written Report; Mechanics; and, Cooperation.

Starting Points for a Washington, D.C. Virtual Tour

Yahoo, Washington, D.C.

http://dc.yahoo.com/

Organized the same way as the Yahoo directory, but all the topics relate to Washington, D.C.

National Capital Parks

http://www.nps.gov/nacc/

The place to go for links to the Washington Monument, Lincoln Memorial, Jefferson Memorial, Vietnam Veteran's Memorial, among other important National Park sites in Washington, D.C.

City Net: Washington, D.C.

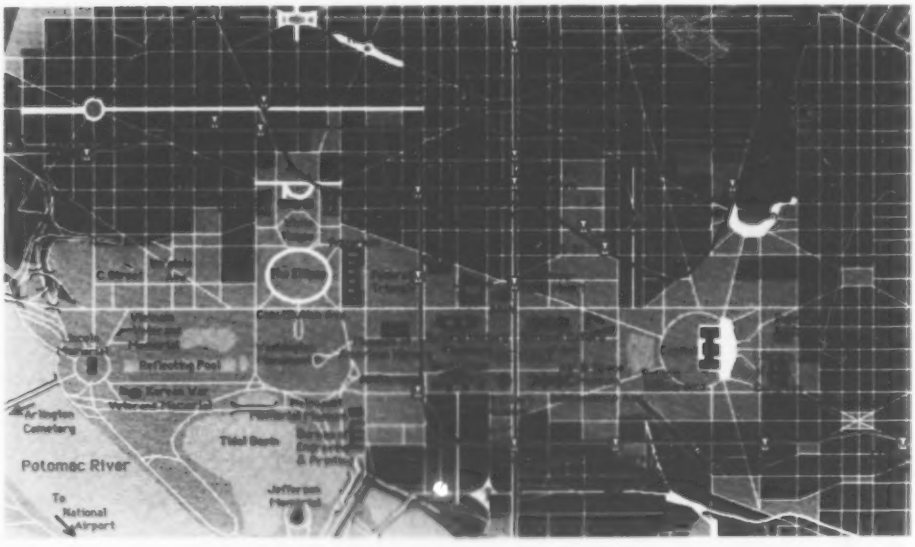
http://www.city.net/countries/united_states/district_of_columbia/washington

Another resource directory that is easy to use.

Clickable Map of Washington, D.C.

http://sc94.ameslab.gov:80/TOUR/tour.html

A small (37K) and accurate map of the Federal Area to give you a general idea of the location of everything you are going to visit.



Travel on the Metro System in D.C.

http://metro.jussieu.fr:10001/bin/statmap/english/usa/washington

Make a copy of this map and use it for your actual tour of Washington, D.C. (I've lived in D.C. and this map is a BIG help!)

The Declaration of Independence

http://lcweb2.loc.gov/const/declar.html

The U.S. Constitution

http://lcweb2.loc.gov/const/const.html

The White House

The White House

http://www.whitehouse.gov

A trip to Washington, D.C. means a visit to the White House. At the virtual White House are links for the President and Vice President, an Interactive Citizens' Handbook, White House History and Tours, Past Presidents and First Families, Art in the President's House and Tours, The Virtual Library, The Briefing Room, and the White House for Kids. I particularly like the links for Kids and Past Presidents.

The White House Collection of American Crafts

http://www.nmaa.si.edu/whc/whcpretourintro.html

American crafts made from ceramic, wood, fiber, metal and glass are displayed at this Web site.

Some Monuments and Memorials

The FDR Memorial
http://www.axionet.com/key/FDR/Comm.html.

The Jefferson Memorial
http://sc94.ameslab.gov/TOUR/jeffmem.html.

The Lincoln Memorial
http://sc94.ameslab.gov/TOUR/linmem.html or **http://www.nps.gov/linc/index2.htm**.

Mount Vernon
http://www.mountvernon.org/.

The Vietnam Memorial
http://www.nps.gov/vive/index2.htm.

The Washington Monument
http://www.nps.gov/wamo/index2.htm.

The Old Executive Office Building
http://www.whitehouse.gov/WH/Tours/OEOB/.

The Congress

The best source for everything about the Senate and House of Representatives, is the Congressional Record, which features important speeches from the last two congresses, as well as information on how the legislative branch of government works.

The House of Representatives
http://www.house.gov/

The Senate
http://www.senate.gov/

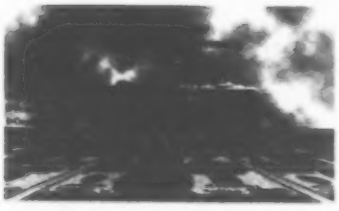
Thomas (named for Thomas Jefferson)
http://thomas.loc.gov

Congress.Org
http://207.168.215.81/

Cabinet Level and Other Agencies

To find out information about the President's Cabinet, click on some of these links.

The President's Cabinet
http://www.whitehouse.gov/WH/Cabinet/html/cabinet_links.html



The Treasury Department
http://www.ustreas.gov/

The Department of Justice
http://www.usdoj.gov/

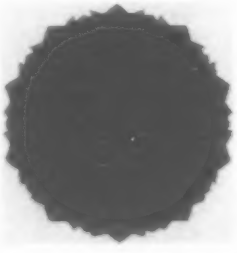
The Department of Defense
http://www.dtic.dla.mil/defenselink/

Other Departments of Government
http://www.law.vill.edu/Fed-Agency/fedweb.exec.html#feddept
or
http://www.usdoj.gov/other-link.html

FedWorld
http://www.fedworld.gov:80/

The Federal Bureau of Investigation
http://www.fbi.gov/

The Central Intelligence Agency
http://www.odci.gov/cia/



Libraries and Museums

The cultural life of Washington is a rich one: museums, scientific institutions, art galleries, libraries, and more. D.C. is a showplace to the world of the best that America has to offer.

Library of Congress

http://www.loc.gov/

View three excellent presentations: "The American Memory" which looks at American history at **http://lcweb2.loc.gov/ammem/http://loc2.gov/ammem**; "Thomas" (mentioned above in Congress); and "Exhibitions" at **http://lcweb.loc.gov/exhibits/**.

The Smithsonian Institution

http://www.si.edu/

Follow the links to find out information about each of the various museums that make up the Smithsonian Institution.

The Natural History Museum
http://nmnhwww.si.edu/nmnhweb.html

Air and Space Museum
http://www.nasm.si.edu/

National Zoo
http://www.si.edu/natzoo/

The Smithsonian Gem and Mineral Collection
http://galaxy.einet.net/images/gems/gems-icons.html

The National Holocaust Museum
http://www.ushmm.org:80/index.html

Other Tours

You have an idea now how to design virtual tours for other cities. Using this model, I've seen tours made for several towns and cities in the U.S. and for several virtual tours of schools. A virtual tour of your hometown is a challenging class project and would look great on your class home page (see Chapter 5). If you decide to make one up, please send it to me at **cotton@instruction.com** and I'll post the address on the Web site for *The Online Classroom* at **http://www.cauchico.edu/educ/3toc.html**.

Washington, D.C. Web Site Log

Group Name: _____ Date: _____

Members: _____ _____

_____ _____

Today we viewed the following Web sites:

http:// _____ Title: _____

http:// _____ Title: _____

http:// _____ Title: _____

http:// _____ Title: _____

The most important Web site we viewed was http:// _____

It was important to our virtual tour of Washington, D.C. because:

_____

_____

Another important Web site was http:// _____

It was important to our virtual tour of Washington, D.C. because:

_____

_____

Today we learned the following about Washington, D.C.:

_____

_____

Describe the Web sites you want to include in your virtual tour and why you want to include them. You may use the back of the paper if you run out of room.

_____

_____

Evaluation Rubric for "Virtually Together in D.C."

Assessment Area	Exemplary	Proficient	Not Yet
Web Site Logs	• Completed for each day online • Responses to items show original thought processes • Reflect excellent use of Internet time	• Most days online are logged in • Responses to logs are satisfactory • Reflect good use of Internet time	• Web site logs are incomplete • Reflect poor use of Internet time
Ideas, Content and Organization of Virtual Trip	• Bookmarks are in order • Bookmarks show variety of themes • Ideas are clearly presented • Interesting sites are chosen that hold attention of audience	• Bookmarks are not in correct order • Bookmarks show only one or two themes • Ideas are somewhat clear • Most sites are interesting to the audience	• Bookmarks are not organized • Bookmarks show no theme • Ideas present are unclear • Boring and does not hold the attention of the audience
Ideas, Content and Organization of Written Report	• Report and bookmarks work together well • Report is well organized • Content of report relates to Washington, D.C. tour • Excellent explanation of significance of each chosen Web site	• Report and bookmarks coincide • Report shows good organization • Content mostly relates to Washington, D.C. tour • Good explanation of significance of each chosen Web site	• Report and bookmarks do not coincide • Report disorganized • Content wanders • Poor explanation or no explanation of significance for Web sites chosen
Mechanics	• Excellent grammar, punctuation and spelling • Easy to read aloud	• Good grammar, punctuation and spelling • Most parts easy to read	• Faulty grammar, punctuation and spelling • Awkward to read out loud
Cooperation	• Students worked well together • Students shared the work load fairly • Students solved problems in a fair manner	• Students worked together with little strife • Burden of work done by small part of the group • Students solved most problems in a fair manner	• Students did not work well together • Burden of work done by one member of the group • Teacher intervention was needed to solve problems

Chapter 12:

Get a Job!

One of the benefits of an education is that it can help you get a job. The first step towards getting a job is writing a résumé. The Internet is a great resource for finding out more than you want to know about conceiving and writing and targeting a résumé, finding a job, interviewing for it, and selling yourself personally and professionally. The purpose of this chapter is to give senior high-school students the chance to explore the various résumé home pages on the Web and craft their own résumés in preparation for a job interview. This résumé can be either for a job right now or part of an application for college. Either way, résumé writing is a skill that every student will need upon graduation and for the rest of their working lives.

In Your Classroom

Job Hunting with a Safety Net

Goal

Understand and craft an effective résumé.

Rationale

Writing a powerful résumé is an important skill that you use throughout your working life. Every professional needs to keep his or her résumé up-to-date because in today's world of unstable employment, one never knows when it will be needed. Practice in résumé writing will help high-school students learn what it takes to produce a résumé that leads to a job.

Objectives

- Students will read Web pages about résumés.
- Students will construct a résumé.
- Students will use the résumé in a job-interview simulation.

Procedures

Set the stage by showing your students a variety of résumés. Some of the résumés should be very good and some should be just the opposite. Discuss the aspects of each type of résumé. There are résumés and résumé guides on the Web, so samples are easy to find. Also discuss writing a Web site Summary Log. This is a notebook page that lists the Web sites the student viewed, including the URL and Title of the Web site and a brief summary of what was found there. The Web site Summary Log can be referred to often, as it is sometimes not possible or advisable for students to bookmark Web sites on a classroom computer. The Web site Summary Log can be considered an offline bookmark.

How to find résumés on the Web

The first step is to use a Web search engine, like WebCrawler or InfoSeek, to search for words like "résumé," "résumé writing," "curriculum vitae," or "vita," and see what you get. Tell your students that they are to develop résumés that will help them get jobs or assist them with their college applications. Show them various sites on the Internet that help with résumé development, and let them glean the information offered there. For students who have not had a job, have them list volunteer work they have done, school and/or church organizations they have belonged to, or babysitting for younger siblings or neighbors. The final product is each student's design of an honest, workable, effective résumé that can be used to find a job or as part of a college entrance application or application for a scholarship, loan, or grant. Get some parents or community members involved who have experience in the business world or in higher-education admissions. Ask them to look at working drafts of the résumés and make comments and offer suggestions.

Once students have composed their résumés based on examples and advice chosen from various Web sites (and résumé volunteers), they need to prepare their texts on a computer using a word-processing or desktop publishing program. Proper software will allow them to design a résumé that is attractive and useful. A résumé that is maintained on a computer file can be easily updated—which is a never-ending task. When your students get another job, finish another class, or accomplish something else they are proud of, they will want to add the accomplishments to their résumés.

The pros in the field say that a résumé should be tailored to fit the job. A generic "one size fits all" résumé is often an ineffective strategy. With a computerized version of your résumé, you can tailor it to meet the specifics of a job description. A résumé is a personal advertisement.

Before printing a final copy of a résumé, have your students set it aside for a day or two, then reread it and check to see that it says what they want it to say. Have several friends and colleagues

proofread it to see if it conveys the intended message: ***Hire me! I'm the right person for the job!*** Résumé writing is, therefore, a high-interest opportunity for group collaboration as your students read and critique each other's résumés.

You can also find résumés (on- and offline) that have been hastily crafted. Call attention to these blemishes in other people's self-ads, and engage in a discussion on how to put one's best foot forward in a global, public display of one's life, accomplishments, and talents. A résumé does not have to be boring or dull, but it does need to be professional looking and positive sounding.

For a culminating activity, invite back your "résumé helpers" or a couple of parents or local business people to stage mock interviews with your students based on their résumés.

Variations on a Theme

If you have students who have little or no work experience, they can develop a résumé for a historical figure, a character in a novel, or for a member of their family. Students can also use this lesson as a way to learn how to set goals. They can write a two-part résumé: Part I is an explanation of what they have accomplished to date; Part II shows what they want to accomplish in five years (or after they graduate from college).

Evaluation

The final product is the proof of the lesson. Are the résumés honest, realistic, workable documents? Will they be effective in the eyes of a prospective employer or admissions officer? Are they attractive as well as useful?

Listed below are some Web sites where you and your students will find useful information about résumé writing. A few sources are specifically for high-school students, while some sources are specifically for college students and professionals. By looking at this mixture, your students will discover how important this skill is in gaining future employment. These are links your students can use when developing ideas for their own résumés.

Internet Help with Résumé Writing

Anatomy of a Résumé

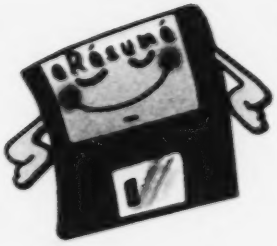
http://www.espan.com/docs/anatres.html

This Web site defines the basic components of a professional résumé: objective, summary of background information, skill areas, education, job history, and professional and/or community affiliations. While at the same Web site, click on **http://www.espan.com/library/libresume.html** for more résumé resources, such as a dictionary.

Joyce Lain Kennedy's Electronic Résumé Writing Tips

http://www.espan.com/docs/jlkresu.html

Along with nine basic rules of résumé writing, there is some good advice here, but no examples of résumés. Joyce Lain Kennedy is a nationally syndicated careers columnist and has written several books on résumé writing.



Rebecca Smith's eRésumés and Resources

http://www.eresumes.com/

A very comprehensive look at how to write a résumé for the 21st century. You can view résumés online as well as learn more about style, format and content.

Important Career Information

http://www.espan.com/docs/index.html#resume

A master list of links about how to find and keep a job. Included are links to résumé writing and interviewing.

Top Ten Technical Résumé-Writing Tips

http://www.taos.com/resumetips.html

Don't let the technicalities get in your way, the ten writing tips are good ones and they reinforce Kennedy's nine. Scroll down the page and find answers to common questions about layout, use of pictures, and the like.

Top Secrets of Résumé Writing

http://amsquare.com/america/advance2.html

Lots of secrets are revealed on how to make a résumé shine. It is only text and it is long, but the information is useful.

A Guide to Effective Résumé Writing

http://www.ceweekly.wa.com/helpful/grw.html

This site provides guidance on how to write, lay out, and deliver a résumé. Look at a sample résumé at **http://www.ceweekly.wa.com/helpful/sampres.html**.

Career City: Hot Advice

http://www.careercity.com/hot/getinter/getinter.htm

Easy-to-use information on what to include in a résumé, format, and "bloopers" (things you don't want on your résumé), **http://www.careercity.com/hot/getinter/resume/bloopers/bloopers.htm**.

It's easier for beginners to visualize their own résumés after they have seen some samples. Not many teenagers are seeking jobs over the Internet, so there are few résumés by high-school students posted on the Internet. Thousands of résumés written by high-school and college graduates, however, are posted. These offer excellent examples of form and substance, both good and bad. To find a comprehensive up-to-date list, go to Yahoo and type in "résumé," scroll down the huge list until you see "individual résumé" and start clicking away. You will see there are many different examples of résumés on the Internet.

A Final Word

A résumé is a necessity for getting almost any job: be it truck driver, machinist, grocery worker, teacher, computer programmer or somewhere in management. When your students have access to the myriad of résumés on the Internet for guidance, they can develop the skills needed to write a résumé. When your students have been introduced to the skill of résumé writing, they will be better prepared for their future.

Evaluation Rubric for "Get a Job!"

Assessment Area	Exemplary	Proficient	Not Yet
Organization	• Job objective indicated • Each section of the résumé is clearly denoted • Logical scheme (either chronological or from most to least important)	• Job objective indicated • Each section of the résumé is somewhat easy to find • Somewhat logical scheme	• No job objective indicated • There is no coherent organization evident
Content	• Each section is consistent with other sections • All content is honest and realistic	• Each section is readable • Content is valid	• Content questionable
Style	• Many active verbs are used • Excellent writing style	• Some active verbs are used • Good writing style	• Few or no active verbs • Style is lacking
Mechanics	• Excellent grammar, punctuation and spelling • Proofread by other students and edited	• Good grammar, punctuation and spelling • Evidence of some proofreading by another student • Evidence of editing	• Faulty grammar, punctuation and spelling • No evidence of proofreading
Internet Experience	• Used Internet time well • Searched for other online resources • Maintained a daily summary log of Web sites visited	• Followed the sources given in the chapter • Maintained a summary log of Web sites visited 3 to 4 times a week	• Did not follow resources given • Did not search out new resources • Did not maintain summary Web site log

Chapter 13:

A Book an Hour

Teaching strategies take on a whole new life when adapted for use with the Internet. With this chapter, you and your students can practice using your Web browser while reading a book in an hour. "A Book an Hour" is an excellent and speedy way to introduce a whole book to middle- and high-school students, whether a novel, history or science text, or literary classic.

Prior to high-tech, the strategy has been:

- Divide a book into chapters or sections so that small groups of students can read the parts and collaborate in preparing summaries.
- A spokesperson for each group, beginning with the group that has read the first segment of the book, tells that group's summary. The next segment's group does the same, and so on until the whole story had been told to the class.
- As the summaries are read, develop a master chart either on the board or an overhead transparency to map out the story according to the summaries.
- At the end, the whole class works on a summary of the summaries of the several parts.

Together, your class will have read, reported, and summarized a whole literary classic in a single period, if the book is not too long.

When I've used this approach, I've found that I needed a minimum of two class periods for the strategy to work best, and I also need more time when I use the strategy with a class for the first time. Although this approach does not allow for a close reading of the text, it is a quick and easy way to introduce a work of literature to your students. They might get the idea that "literature" can be fun to read. This *hors-d'oeuvres* approach will whet their appetites for more reading on their own.

In Your Classroom

An Online Book an Hour

An electronic version of "a book an hour" might go something like this: Instead of dividing up hard copy into chapters or sections, your students search out, download and divvy up, then read an electronic copy of their respective parts. If the book is not too long and is accessible online, students could read their sections directly from the Internet, but I don't recommend that. There is no point in tying up the connection that long. More logical and less expensive, I suggest downloading the book onto a hard drive or diskette, converting it to the class word-processing package, dividing the text into segments with block-and-copy moves, then have your students read their segments on their computers or print out a hard copy of the text. Every student gets to read his or her own copy; and, at the end, a saved backup copy of the whole book becomes the readable property of every student, the first volume in their electronic library.

While your students are reading their sections of the book on their computer screens, they can also be taking notes; multitasking between two files. One file is the copy for the book, the

other is a word-processing file for notes. They can also write notes using pen and paper. Whatever method is used, your students can record their thoughts instantly and easily, and build their summaries as they read. Printed paper books, even with the widest of margins, do not allow for this extent of editorializing as one reads.

Using the block-copy-move function and the split-screen, your students can assemble their electronic notes into a draft of a summary, then rewrite and reformat it with word processing-based ease. Each member of the group can read the draft-summaries of all the other members, typing out comments in shared-journal fashion. Then, when they meet in their groups to talk over the details and polish a final summary of that group's segment, they will have the benefit of already having read one another's individual comments and summaries.

Goal

Your students will become familiar with a classic work of literature by reading, commenting, summarizing, and crafting a summary of summaries of the selection, in one or two class periods.

Rationale

It is sometimes difficult to generate interest in "the dead poets" and other classical authors. Their literary legacy is, nevertheless, a major part of the culture of our society and the light of our aesthetic life. However, an electronic "skimming" of one of their works can involve students who normally would be put off from the story by old-fashioned language and a slower-than-usual pace. When your students become familiar with these fine and enjoyable works of literary art in a meaningful yet "painless" way—and at the warp-speed of a video game—then fewer of them will register the universal complaint: "This is boring!" When they have a sense of the overall plot and characters now in mind, they will be encouraged to read the full version of the classic on their own.

Objectives

- Students will download, read, comment upon and summarize a segment of a piece of literature.
- Students will discuss segment summaries and create a summary of summaries for the whole book.
- Students will collaborate on reading a classic work of literature in a short amount of time to whet their appetite for other pieces of literature.
- After several books have been read using these electronic strategies, students can compare and discuss the various works of classic literature in relation to each other.

Optional Objective

Publish a Class "Illustrated Classic Comic"

- Students draw (either freehand or using a computer drawing program) pictures for each summary. Make a notebook of the pictures, each picture to be accompanied by its respective summary, with the "grand summation" at the end to complete the project.

Procedures

To generate enthusiasm, you need to stage the first event well. If you hook up with a smooth Internet connection and high-interest electronic books the first time you use the strategy, then you will be off to a good start. If you are studying the Romantic Period, for example, you will definitely want your students to read the works of Edgar Allan Poe. Show your class that you have only a few copies of the book, but through the wonders of electronics, everyone is going to read chapters of this book and make their own comments about the significance of the story. At this point, the class Web walks to Poe (you will already have located the site because you want this lesson to go rapidly), and your students take it from there. To see online versions of many of the works by Edgar Allan Poe check out "*The Incomplete Works of EAP*" at **http://www.comnet.ca/~forrest/works.html**.

Select the Poe title you want. Have your students block and copy the text, divide it into segments, and copy onto diskettes for reading and annotating. Have your students work in small groups. If you have more students than you have computers, then each group of three or four students can cluster around a computer. Let one student act as electronic scribe, seated at the keyboard, while the others read the screen and offer comments.

As a regular routine in an English or Language Arts class, this strategy can be used about once every other week quite effectively. Students enjoy it and look forward to doing it again and again. You may assign your students to do the surfing to find next week's book.

Evaluation

The various possible versions of this activity are easy to evaluate: Did the chapter/segment summary-writing work? Did your students take hold of their parts of the book and understand them? Did the summary of summaries work—is it logical and accurate? Is there a notebook of summaries and the summary of summaries? If they wrote and illustrated an "Illustrated Classic Comic," how does it look? Above all, did your students engage wholeheartedly in the discussion of the book? If you can answer yes to these questions, then you and your students did a good job.

Many sources for classic literature are available on the Internet. Use directories or search engines to generate your own list: Search under "Literature," the names of your favorite authors, or even topics. Sometimes, unfortunately, if you are not a member of a particular Web site, you cannot download the document, but usually this is not a problem. For this reason, you will want to have walked around the Web in search of free, downloadable literature, or be ready to pay. The Gutenberg Project and the Online Book Initiative are excellent sources of public domain literature. Their URLs are listed below.

This strategy takes some planning on your part and you will need to explain it fully. I've found that the first time I use this strategy with a class, the students don't know what to expect. However when I give the students some background information on the book, who the characters are and an inkling of the plot; and then I tell them that they are going to read the book in one or two class

periods, they begin to get excited. If the first experience is positive and fun, the students begin to anticipate future experiences. Therefore, the first time you try this strategy, you want to make sure that your goal is attainable. After the first positive experience, I assign the Internet search-work to my students, and oftentimes they select the next piece of electronic literature for the class.

Whole Books on the Internet

Electronic Library

http://www.books.com/scripts/lib.exe

The Electronic Text Center at the University of Virginia

http://etext.lib.virginia.edu/english.html

A list of hyperlinks to several hundred books written in English. At the main site (**http://etext.lib.virginia.edu/uvaonline.html**) you can read books in French, German, Japanese, or Latin.

Books On-line By Title

http://www-cgi.cs.cmu.edu/cgi-bin/book/maketitlepage

This general collection of literary works, organized by title, is maintained by the library at Carnegie Mellon University.

The Online Book Initiative

gopher://ftp.std.com:70/11/obi/book

In your browser, type this gopher address to view a list of over 150 authors and categories. There are books by G. Chaucer and E. Brontë, by Edgar Allan Poe and Sir Arthur Conan Doyle, from Anglo-Saxon literature to Samuel Clemens, among others. You

will be surprised at all there is to read at this one location. With this one site, you will never lack for literature. Remember this is a gopher site, so all you will see is text.

The Bard on the Internet

http://the-tech.mit.edu/Shakespeare/works.html

The works of William Shakespeare are read by most tenth, eleventh, and twelfth graders. The full text of Shakespeare's plays, poems, and sonnets can be downloaded from the MIT Web site. The collection is arranged by category: comedy, history, poetry, tragedy, etc.

Project Gutenberg: Home Page

ftp://uiarchive.cso.uiuc.edu/pub/etext/gutenberg/pg_home.html

Don't let the FTP address dissuade you visiting this site. The goal of Project Gutenberg is try to upload a trillion texts by the year 2000 and many of them are already online, but they need to be condensed files that have to "unzipped" (if you're on a PC) or "unstuffed" (if you're on a Mac). Once you arrive at this Web site, scroll to "author and titles listing."

Romantic Circles

http://www.inform.umd.edu/RC/rc.html

A Web site devoted to the works of Lord Byron, Mary Wollstonecraft Shelley, Percy Bysshe Shelley, John Keats, their contemporaries and their historical contexts. Scroll down to "electronic editions" or go to **www.inform.umd.edu/RC/pages/elec-ed.html** for the texts.

Women and Literature

http://sunsite.unc.edu/cheryb/women/wlit.html

If your class is interested in women writers, you can find short biographical sketches and works by Louisa May Alcott, Jane Austen, Emily Brontë, and Sylvia Plath, plus many others.

Victorian Women Writers

http://www.indiana.edu/cgi-bin-ip/letrs/vwwplib.pl
(the HTML index)

A collection of thirty-seven works by twelve British writers of the Victorian Era.

A Celebration of Women Writers

http://www.cs.cmu.edu/Web/People/mmbt/women/writers.html

A list of women authors. Click on the underlined links to view either biographies or their writings.

All of these classical works of literature are on the Internet because their copyright has expired or they are "public domain documents." This means you can copy them and not be violating a copyright agreement. This also means, that most literature found on the Internet was not written within the last twenty years.

Download to your heart's content! Most of it is all still free for the taking—it's like being given an unlimited gift certificate to your favorite bookstore. You will need to establish a storage policy for your class because those hard drives will fill up in no time. If your system includes a spacious server, and every user has a "student locker" in which to save downloaded files, then you are very lucky. If not, it's every kid with a floppy for him- or herself.

"A Book An Hour," has many adaptations. For some content areas, teachers may be able to use a similar process with particularly long chapters in a book, if the topic lends itself to being split up in this fashion. The Internet is one of the greatest libraries around. It never closes, does not require you to return the books, and it levies no fines. What a treat!

Evaluation Rubric for "A Book an Hour"

Assessment Area	Exemplary	Proficient	Not Yet
Summary Construction	• Excellent summary of book segment that is logical and accurate	• Good summary of book that is short but accurate	• Unable to write a short summary • Many factual inaccuracies in the summary
Understanding of the Book	• Summary reflects a very good understanding of the total book as well as the section • Group makes excellent contribution to summary of summaries	• Summary reflects a good understanding of that portion of the book • Group makes simple contribution to summary of summaries	• Summary does not reflect understanding of the book • Group makes small or no contribution to summary of summaries
Classic Comic Edition (optional)	• Graphics and summary enhance the text	• Graphics and summary work well together	• Graphics and summary are not related
Computer and Internet Experience	• Students found Web site for book easily • Students downloaded information easily • Students used knowledge of "multi-tasking" to write summaries	• Students needed little guidance to find the Web site • Students needed some help in downloading information • Students wrote summaries either by computer or by hand	• Students were unable to find book on line without assistance from others • Students were unable to download information • Students wrote summaries in long hand
Mechanics	• Excellent grammar, punctuation and spelling	• Good grammar, punctuation and spelling	• Faulty grammar, punctuation and spelling
Cooperation	• Students worked well together • Students shared the work load fairly • Students solved problems in a fair manner	• Students worked together with little strife • Burden of work done by small part of the group • Students solved most problems in a fair manner	• Students did not work well together • Burden of work done by one member of the group • Teacher intervention was needed to solve problems

Chapter 14:

The Ambassador to Mexico WebQuest

A WebQuest is another type of educational experience that is ideal for the Internet. It is a learning process developed by Bernie Dodge at San Diego State University and has been used by many teachers to date. The December 1996/97 Issue of *Classroom Connect* says that "WebQuest" has become one of the buzzwords in educational technology. The lesson for this chapter, *The Ambassador to Mexico WebQuest*, follows the basic template for such a lesson. To find out more about the WebQuest process and to see other WebQuest lessons, please visit the following Web sites:

The WebQuest Page by Bernie Dodge
http://edweb.sdsu.edu/webquest/webquest.html

The WebQuest Design Process by Bernie Dodge
http://edweb.sdsu.edu/webquest/Process/WebQuestDesignProcess.html

WebQuest Lesson Template for Students
http://edweb.sdsu.edu/webquest/LessonTemplate.html

WebQuestion Lesson Template for Teachers
http://edweb.sdsu.edu/webquest/TeacherLessonTemplate.html

Kathy Schrock's WebQuest Guide
http://www.capecod.net/schrockguide/webquest/webquest.htm

Kathy Schrock's WebQuest Slide Show
http://www.capecod.net/schrockguide/webquest/wqsl1.htm

Generally speaking a WebQuest is a discovery investigation (or inquiry-based) activity in which students are to locate information about a topic from the Internet (and other resources such as books, magazines and encyclopedias) to help them develop a presentation. A WebQuest can be either a short-term or long-term project. In either format, it develops analysis and synthesis skills in researching, writing, and presenting. Whether short- or long-term, the students are gathering new knowledge as well as extending their existing knowledge in an area by analyzing and reconstructing a body of information into some kind of an original presentation. A WebQuest should be more than just writing a report, it may include role play, demonstration or simulation. Many of the lessons in this book are good "warm-up" activities for a WebQuest-type lesson. This type of lesson is more sophisticated and should be accomplished when you and your students are ready for a more challenging task. What I've described below is a long-term unit on the study of Mexico.

In Your Classroom

Teacher Template: Ambassador of Mexico WebQuest

WebQuests generally have two sections. One for the teacher and one for the student. When designing a WebQuest, the teacher needs to choose a topic, identify resources, establish goals, design assessment strategies, specify the task(s) for the students to accomplish, design the lesson, develop Web pages, implement the lesson, and then, after it is completed, evaluate the results and revise it for future use. What follows is the Teacher Template, followed by the Student Template for the WebQuest.

Introduction

(This is written for you the teacher, to give you an idea of the scope and sequence of the WebQuest.)

This lesson is designed to help your students discover ways to retrieve meaningful information from the Internet. They will become familiar with Mexico by studying its geography, history, politics and government, culture and society, language, archeology and the lives of the children who live there.

In this activity, you are asking your students to be the "advance party" which has been assigned to provide you with a special briefing, since you have just been chosen to be the new Ambassador to Mexico. The "advance party" will be divided into teams, each studying one aspect of Mexico for the purposes of preparing a written report and oral briefing for you, before you leave for your new career.

Content Area and Grade Level Audience; Curriculum Standards

The lesson is designed for the secondary (middle school and high school) social studies class. This lesson reinforces curriculum standards in the areas of history, geography, political science, culture, and archeology, and it gives further practice in communication skills. By the end of the lesson, each team of students will have expertise on one aspect of life in Mexico. From the various briefings, they will also have a more thorough knowledge about our neighbor to the south.

Implementation Overview

You will divide your class into teams of advance parties, each with the task of finding information on one specific topic. Each team will be given a worksheet with important questions that they need to answer and a set of relevant Web sites. They can also add questions and Web sites to the basic set when it becomes necessary to do so. If all goes according to plan, the Ambassador WebQuest should take about three weeks to accomplish. It will take at least three to four class meetings to cover all the worksheet questions. You will need two to three class meetings for each team to work on a written report. During the next two class meetings the teams will begin the preparations for the oral briefing, including role plays, demonstrations, etc., that will be presented to the new Ambassador. At the last class meeting(s), the teams will brief the new Ambassador and be prepared to answer any questions that she or other classmates have. To make this splashy, you could videotape the briefing section and show it to other classes.

You may want to provide your students with a sample WebQuest unit so they may have a model for this activity. Kathy Schrock's *WebQuest* page has several lessons for you to show: visit **http://topcat.bridgew.edu/~kschrock/ED560/ed560.htm**.

Resources Needed

You will need to have the following resources available to teach this lesson:

- Class sets of books on Mexico, including fiction and nonfiction.
- Encyclopedias, atlases, dictionaries, language books.
- Video or audio materials on Mexico.
- Online computers and E-mail accounts for students.
- Appropriate software for 1) online research and 2) word processing.
- Lists of Web sites for geography, history, political science, culture, language, archeology and children which are bookmarked or cataloged on a Web page.

To accomplish the lesson, you will also need: one social science teacher (and a Spanish teacher if possible); a librarian/media specialist who can help with research; e-mail addresses for people in Mexico who will correspond with your class; if possible a person from Mexico who can help with some questions; and, Mexican objects and regalia such as clothes, musical instruments, etc. You might include a field trip to a local museum, if there is one, that has Mexican artifacts that will be helpful to your students.

Entry Level Skills and Knowledge

Your students should be able to do a research project. They will need to search for items on the Web; sift data to find appropriate information; work together as a team; compose e-mail messages; use a word processor; and, download information from the Internet, etc. You will have to decide if you want your students to self-select teams, or if you will assign teams. (In the student template below, I have the students self-select teams, a procedure which works for some groups of youngsters, but not for all.)

As a teacher, you will need to have the lesson very well organized. A list of Web sites for the lesson appears in the last section of this chapter. From that list, determine Web sites that each team of students should visit. Develop worksheets to help students stay on task.

Evaluation

Use an evaluation rubric that includes: organization of ideas and content in the written report; organization of ideas and content in the briefing; use of art/graphics, role playing/simulation and demonstrations in the briefing; overall Internet experience and usage; and, mechanics and cooperation. You will have to decide if the students on each team will receive a common grade for the written report and briefing or an individual grade. A sample rubric has been included at the end of the chapter.

Possible Variations

I've written a WebQuest which is designed for a unit focusing on Mexico, but this is a basic template that you can use for any country. Also think about other possible WebQuests: "The Pyramids of the World: Egypt and Mexico," "Children Who Have Made A Difference in the World," "Books by Mark Twain," "Women in History," "Sojourner Truth, Mars and Pathfinder," and the list goes on and on. Any topic with quality Web-based information is a potential subject for a WebQuest.

Conclusion

Upon completing this WebQuest your students should:

- Be an expert on their specific topic.
- Be knowledgeable about other aspects of the country from the presentations they have heard.
- Know how to do research using the library and the Internet.
- Have used their creative and artistic talents.

Bookmarks for the *Ambassador to Mexico WebQuest*

General Web sites on Mexico

Windows on the World: Mexico
http://www.wotw.com/mexico/

Profile of Mexico
http://www.state.gov/www/regions/ara/1mexprof.html

Background Notes from the
U.S. State Department on Mexico
http://www.state.gov/www/regions/ara/bgnpage.html

The Mexican Travel Guide
http://www.go2mexico.com/navigate.html

Ministry of Tourism Official
Travel Guide to Mexico (in English)
http://mexico-travel.com/

The CIA World Factbook on Mexico
http://www.odci.gov/cia/publications/nsolo/factbook/mx.htm

Mexico's Index
http://www.trace-sc.com/index1.htm

Planet Earth Homepage on Mexico (1995 update)
http://www.nosc.mil/planet_earth/countries/Mexico.html?Mexico#first_hit

Geography of Mexico

Map of Mexico
http://www.lib.utexas.edu/Libs/PCL/Map_collection/americas/Mexico.GIF

General information about States in Mexico
http://www.mexonline.com/estado.htm

Yahoo Guide to States in Mexico
http://www.yahoo.com/Regional/Countries/Mexico/States/

Yahoo Guide to Cities in Mexico
http://www.yahoo.com/Regional/Countries/Mexico/Cities/

Statistics about Mexico
http://database.iadb.org/int/basicrep/bamex.htm

History of Mexico

A Brief History of Mexico
http://www.go2mexico.com/history.html

A (very) Brief History of El Cinco de Mayo
http://soundprint.brandywine.american.edu/~soundprt/more_info/nogales_history.html

The Meaning of Cinco de Mayo
http://www.kqed.org/fromKQED/Cell/Calhist/cinco.html

The 1910 Revolution
http://www.utep.edu/mecha/

Pancho Villa (in Spanish)
http://mexico.udg.mx/Historia/Trajes/dorado.html

Children and Youth of Mexico

Rock Mexicano (in Spanish)
http://icarus.uic.edu/~gcamac1/Mex.html

Mariachi Web
http://www.qvo.com/MariachiWeb.html

HotWired's Rough Guide to Mexico
http://www.hotwired.com/rough/mexico/

Internet Servers in Mexico
http://mexweb.mty.itesm.mx/Mapa2/

Intercultural E-Mail Classroom Connections
http://www.stolaf.edu/network/iecc/History of Mexico

Politics and Government in Mexico

The Government of Mexico
http://www.presidencia.gob.mx/welcome/gov_hp.htm

Partido Verde Ecologista (The Green Party of Mexico) (in English)
http://www.ntmk.com/pve/indexi.htm

International Web site of the Presidency in Mexico (in English)
http://www.presidencia.gob.mx/welcome/index.htm

Government and Political Conditions of Mexico
http://www.state.gov/www/regions/ara/3govpol.html

Foreign and U.S. Mexican Relations
http://www.state.gov/www/regions/ara/5fusrel.html

Money, Exchange and Credit
http://www.go2mexico.com/money.html

Culture and Society in Mexico

Culture and Society of Mexico
http://www.public.iastate.edu/~rjsalvad/scmfaq/scmfaq.html

Frequently Asked Questions about Mexico
http://www.public.iastate.edu/~rjsalvad/scmfaq/faqindex.html

People and History of Mexico
http://www.state.gov/www/regions/ara/2peophis.html

Arte de Mexico
http://arte.cibola.net/arte/
(in Spanish but the art work is universal)

The Burrito Page
http://www.infobahn.com/pages/rito.html

Mexican Cuisine (in English)
http://mexico.udg.mx/cocina/ingles/menu.html or **http://mexico.udg.mx/Cocina/menu.html** (in Spanish)

Bullfighting in Mexico
http://uxdea1.iimas.unam.mx/~david/index.html

Arte & Cultura de Mexico (in Spanish)
http://www.udg.mx/cultfolk/mexico.html

Language of Mexico

Basic Spanish for the Virtual Student
http://www.umr.edu/~amigos/virtual/

Spanish Exercises
http://lola.ursinus.edu/~jarana/ejercicios.html

The Human Languages Page
http://www.june29.com/ (scroll down to Spanish)

Spanish to English Dictionary
http://grub01.physto.se:8080/cgi-bin/sais/~caicato/espanol.html

The Spanish Language
http://www.eden.com/~tomzap/spanish.html

Weekly Spanish Lesson
http://www.june29.com//Spanish/lesson1.html

Stories and Proverbs
http://www.rain.org/~galvan/dichos.html

Archeology in Mexico

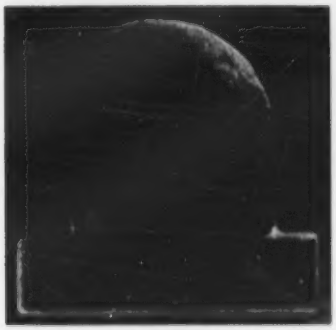
Archeological Sites in Mexico
http://www.wotw.com/mexico/archeology.html

Aztec History (not recommended for children under 14)
http://members.aol.com/SPDTOM/index.html

The World of the Mayan Culture
http://www.yucatan.com.mx/mayas/mapaengl.htm

History of the Maya
http://www.ollusa.edu/alumni/alumni/latino/maya.htm
(text only)

History of the Aztec
http://www.ollusa.edu/alumni/alumni/latino/aztecs.htm
(text only)



Evaluation Rubric for "The Ambassador to Mexico WebQuest"

Assessment Area	Exemplary	Proficient	Not Yet
Organization of Ideas and Content of the Written Report	• Very good introduction • Ideas are clear • Many details are included • Smooth, easy pace • Good placement of details • Strong conclusion	• Good introduction • Ideas somewhat clear • Some details are included • Some trouble following pace • Some details, but out of order • Good conclusion	• Introduction boring • Hard to read • Wanders aimlessly • Stops abruptly or drags on • Unclear ideas • Details broad, general and vague
Organization of Ideas and Content of the Briefing	• Excellent pacing of briefing • Briefing follows written presentation • Briefing includes role plays, simulations and/or demonstrations • Group answers all questions posed by other students or the new Ambassador	• Good pacing of briefing, (few time lags) • Briefing wanders a little from written presentation • Briefing includes only one role play, simulation or demonstration • Group can respond to most questions posed to them	• Pacing of briefing is slow • Briefing disorganized and does not follow written report • Briefing does not include any role play, simulation or demonstration • Group cannot respond to most questions posed by other students
Use of Art/Graphics, Role Play, Simulation, and Demonstrations in the Briefing	• Reflects research • Follows a detailed plan • Carefully and neatly done • Art/graphics are an asset to the text • Role play adds important information to briefing • Demonstrations are well organized	• Reflects some research • Shows some planning • Mostly done carefully and neatly • Art/graphics aid the text • Role play is pertinent to briefing • Demonstrations are organized	• Does not reflect research • Is not planned • Is not done carefully and neatly • Art/graphics harmful to text • Role play is disorganized • Demonstrations are not relevant to briefing
Mechanics	• Excellent grammar, punctuation and spelling • Easy to read aloud	• Good grammar, punctuation and spelling • Most parts easy to read	• Faulty grammar, punctuation and spelling • Awkward to read out loud
Cooperation	• Students worked well together • Students shared the work load fairly • Students solved problems in a fair manner	• Students worked together with little strife • Burden of work done by small part of the group • Students solved most problems in a fair manner	• Students did not work well together • Burden of work done by one member of the group • Teacher intervention was needed to solve problems

The Ambassador to Mexico WebQuest

http://www.csuchico.edu/educ/c14.htm has a listing of the major URLs for this WebQuest.

Group Name: _____ **Date:** _____

Members: _____ _____

_____ _____

We are the advanced party for: _____

Introduction

Your teacher has just been selected as the "Ambassador to Mexico." She/He has accepted the honor of being the Ambassador and has taken as one of her missions to help the young people of the country realize their potential. You know she will be a great Ambassador because she is an excellent teacher and she really cares about you.

However, she needs your help before she leaves for Mexico in one month. Between now and then, you are going to be members of her advanced party. Each team is responsible for briefing her on one aspect of Mexico as seen from the viewpoint of people your age. Therefore, you are going to work in teams, each with a different area of expertise. At the end of the time, you will brief the new Ambassador on everything you know about Mexico. Include in your briefing a written report, maps, pictures, and drawings. Share examples of food, music, dancing and dress too. If role playing or demonstrations are needed, include them in your briefing. Your legwork *is* crucial in helping her become an effective Ambassador to Mexico where she can work with young people.

Teams will gather information from the Internet and other media for information on the following areas:

Geography

- Make a detailed map of the country showing mountain ranges, rivers, large lakes. Show neighboring countries and distance from the United States.
- Find out about ports of entry for land- and water-shipped goods.
- Determine mineral resources, share any examples.
- Determine food resources and share any examples.
- Determine manufacturing resources.
- Show pictures of geography and geology of the country.
- Tell how many states there are in Mexico and point them out on a map of Mexico.
- Show population of each state in Mexico and total population.
- Describe the flag of Mexico and its significance.

History

- What are the important dates in the history of Mexico?
- What are important dates for children and youth in the history of Mexico?
- Are there any "famous" or "important" children who helped shaped the history of Mexico? If so, what did they do that was important?
- Show pictures of people who are famous in the history of Mexico.
- Find out about and re-enact a famous event that shaped the history of Mexico.

Politics and Government

- Describe the political parties in Mexico. What is the name of dominant political party?
- Who is the President of Mexico? Give background information on him or her.
- Describe the capital city of Mexico. Who is the mayor of Mexico City? Tell some important information about the city and the mayor.
- Write about the current policy issues between Mexico and the United States.
- Describe the North American Free Trade Agreement (NAFTA) and its effect on the United States and Mexico.
- Describe the currency (money) of Mexico and give the exchange rate. Share examples if possible.

Culture and Society (Cultural Anthropology)

- What are some customs of Mexico that the Ambassador will have to know?
- What is the native dress of Mexico? Show pictures for girls, boys, women and men; or if possible, wear an example of the native dress. If there is more than one native dress, give examples from the various regions in Mexico.
- What is the main religion of Mexico? What other religions are practiced? Show pictures of churches, temples and/or places of religious worship.
- What holidays or festivals are important to children and youth? Tell the new Ambassador why these are important.
- Share a traditional Mexican food and tell why it's important.
- Share a traditional Mexican dance and talk about its significance.

Language

- What are the languages spoken by the people of Mexico? Give some examples of the main language, as well as phrases that the Ambassador will need to know.
- What are the legends, myths and beliefs of the people of Mexico?
- Share information about the ancient cultures of Mexico and why they are important to the children of Mexico.

Archeology

- Give a brief history of the Mayan culture.
- Share pictures and facts about the Mayan people.
- Give a brief history of the Aztec culture.
- Share pictures and facts about the Aztec people.
- Share pictures and facts about other ancient cultures in Mexico.
- Show pictures and facts about three to four important archeological sites.

Children and Youth

- What type of music is popular with the children? Play a recording of a piece of music.
- What types of clothes do teenagers like to wear? Show pictures.
- Find out information about school. How much schooling is required? How many hours a day? Cost of schooling? College education available? Differences between education for girls and boys?
- What role do children play in the family? Types of chores/tasks/jobs children are expected to do? Are children expected to work? If so, what types of jobs do children do?
- What aspirations do Mexican children have when they reach adulthood?
- What are favorite sports or hobbies for children and youth?

The Process

To accomplish this task you will need to do the following:

- Select the team you want to join, then determine a team leader who is responsible for the calendar and seeing that the written report and oral briefing are done on time.
- Select people to answer each of the questions in the five areas.
- Add questions if you think they are necessary for the briefing of the Ambassador.
- All team members are to write out a summary page for each Web site visited—and book or article read—that had information on your topic.
- Collate the summaries to create a report that answers each of the questions.
- Draw or copy any important maps or pictures to enhance the report.
- Write the report, edit for clarity and errors, then rewrite the report.
- Develop an oral briefing for your report.
- Collect all articles needed for a role play, demonstration or simulation.
- Collaborate with the other teams to determine the order of presentation.
- Give your oral briefing.
- Take notes on other oral briefings.
- Be prepared to answer any questions the new Ambassador has about your briefing.

Evaluation

You will be evaluated on the following:

- Ideas and content of your written report and/or oral briefing to the Ambassador.
- Organization of the report and briefing.
- Cooperation with your team and the class.
- Art/graphics, demonstrations, role play and simulations you included in the report and briefing.
- Mechanics of your report: spelling; grammar; punctuation; and, writing style.

Conclusion

Upon completing this WebQuest you should:

- Be an expert on one of the topics studied on Mexico.
- Be knowledgeable about the geography, history, politics, government, culture and society, archeology and children of Mexico from the briefings.
- Know how to do research using the library and the Internet.
- Have used your creative and artistic talents.

Chapter 15:

The Games People Play

Here it is—computer games on the Internet! Just what you've been waiting for! You were probably thinking that your kids already spend too much time playing computer games, and that if they would only invest some of that time on studying, they would corner the market of electronic knowledge. Face it! Kids play. In fact as many educational theorists have stated, play is kids' work, so why not show them some good, clean, healthy electronic playgrounds on the Internet! That, alas, is easier said than done. All kinds of games on the Internet are available to everyone, but even games that may at first blush look like they're OK for kids, may eventually cause a lot of blushing.

As with arcade games at the mall, some of the games on the Internet are violent and gory, sexually explicit, or filled with language that is too vulgar for the classroom. A few sites rely on chance: You can play a virtual slot machine, poker, or blackjack on the Internet. You can also test your knowledge of beer trivia and take a short course in wine savvy. If you do not want your kids visiting these Web sites, then you will not want to put an all-inclusive games list in your bookmark collection. You will want to be more selective, perhaps compiling your own collection, steering the kids away from the games of which you disapprove by steering them towards the games that you do approve.

Our role, as Internet-using teachers, is threefold: (1) To establish standards that we think are appropriate for our classrooms (and

school and community); (2) To check out all Internet sites that our students might visit to make sure that they meet our standards; and, (3) To explain and uphold our standards with our students, engaging them in discussion to help them understand our point of view and assisting them in learning to discriminate the appropriate from the inappropriate.

This might be a good time to remind them about your Acceptable Use Policy or AUP. We talked about it in Chapter 3. Remember what was agreed upon in your AUP and enforce it.

While playing games might not be the first thing you want your students to be doing in class, they can learn several things by working with games. First and foremost is how to download FTP files. Most games are large, so they have been compressed and placed at FTP sites on the Internet. Thus, if your students download a game, they get practice at using FTP procedures. They also get practice using decompression and virus checking programs, installing the files on a hard drive and then deciphering the game's set up. This is a procedure that can be transferred to downloading other types of files and programs.

Then, there is the issue of "multiple intelligences." According to Howard Gardner, among the seven frames of mind people have, there are logical-mathematical and bodily-kinesthetic folks. Students with these intelligences love games: mind games and physical games, respectively. In addition, game sites do reinforce thinking skills, and sometimes reading, writing and arithmetic.

So Many Games

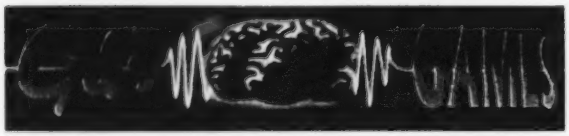
That said, let's go ahead and look at a general games list so that you can be knowledgeable about what's out there. Then glean from the general list the games that you think will be interesting and appropriate. Start to build your own selected games list for availability to your class on your bookmark collection. I've listed a few "child safe" game sites that have some teaching/learning merit. If you are interested in other types of games, check out Yahoo! and click on Games.

Family Friendly Games at **http://www.familygames.com/index.html** is a collection of games that you can download before you decide to buy them. Every game at this SafeSurf-approved site is designed with kids and learning in mind.

Alive Software Games and Education at **http://www.alivesoft.com/** offers free downloads for PC users of their various games that reinforce thinking skills and strategy. Each game has a short introduction and a link to click to download the game.

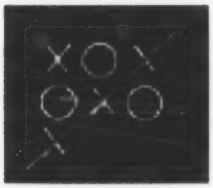
EP Studies at **http://www.epstudios.com/games/index.html**. The people who developed "Where in the World is Carmen Sandiego?" offer a new electronic game site for students and classrooms. Click on their "*about us page*" **http://www.epstudios.com/epstudios/leopr.html** to find out how you can use their materials to teach skills to your students.

In addition to Web sites where you can download games, there are Web sites where you can actually play games online. I personally feel this is a use of expensive computing time that has to be completely justified on an educational basis. Now, after saying that, as I was checking out game sites, I got completely lost in a game of *Webtris*, so be careful. These sites can be dangerous eaters of time. If you would like to get lost in *Webtris* (a Web version of Tetris), you can visit this URL in the United Kingdom: **http://www.blueberry.co.uk/PIER-Gld.html**. You will find many interactive games at this Web site. That means, several people can log on to a game at the same time, and play it. You never really know if you have control of the board, which makes trying to figure out strategy very difficult. I like Tetris. It teaches spatial awareness, the knack we need for the creative cramming of stuff in drawers, small refrigerators, and moving vans. When my nephew moved to a new apartment, he said that experience with Tetris had helped him pack the trailer because he could visualize how the chairs would look when they were turned upside down and backwards.



For "kid-oriented games" go to *Fish in Space* **http://www.jaked.org/**. This site has a Magic 8 ball for predicting the future as well as an easy-to-use game of *Tic-Tac-Toe* (**http://www.jaked.org/ttt.html**). There are three modes of play: very easy, easy, and hard. You can choose to be either the X or the O. This is an excellent game of strategy and sportsmanship, and your kids do have to think to make T-T-T work. A more difficult version of *Tic-Tac-Toe* is the three dimensional variety at **http://www.hepl.phys.nagoya-u.ac.jp/cgi-bin/3dttt**. This Web site offers no directions for getting the game to start, but it's easy: point and click, then wait for the computer to make a move, and then point and click again. The X's and O's will appear magically on the screen before you. The game keeps a winner's list of the names of people who have been successful at it.

At Boston College's **http://www.bu.edu/Games/games.html**, you can play several logic games that pit you against a computer. The computer usually wins. The Peg Game, Tic-Tac-Toe, Minesweep, Hunt the Wumpus, and 9 puzzle are non-Java games. They also have Java versions of Battleship and 9 Puzzle. The Java games are faster than the non-Java games, but you must have a browser that supports them. If you want to see what Java enhancement can do for a game, compare a Java game with a non-Java game. There really is a difference in speed and "mouse-ability" in the Java version, because the program is running on your machine, rather than a Boston College Web server.



Chess games abound on the Internet. You can find a Java *Internet Chess* game at **http://www.cs.uwindsor.ca/users/h/haddad/chess.html**, but this is just one of many. I wish I could give you more information about which site is the best, but this is one game I've never been able to get into. This is one of my many shortcomings. What can I say?

If you want to download games to your own or the class computer, bear in mind my warnings. For one thing, the sites are busy, so it may take awhile. Also, these Web sites contain child-safe games, but there are other game sites on the Internet that do not. In your searches, if you find a game that is too violent or otherwise inappropriate, my advice is the old saying, "Pick the roses and leave the thorns."

You can also devise your own games using online resources. You can also invent computer-aided games based on tried-and-true classroom games that have been used for eons.

For example, I developed an Anticipation Game that was based on a Web site relating to a subject one of "my" classes was studying (I work in many classrooms during the year). The Anticipation Game teaches the students better use of a search engine or directory, as well as the Find button (which searches for a chosen word on a Web page) in Netscape. It also reinforces reading skills through skimming and scanning, and writing skills. To make the game work, you need a Web site with links to other pages. Luckily, Web sites like these are readily available on just about any subject area you can think of and a few are listed in other chapters of this book. You can do an InfoSeek Search on "Bosnia" and come up with a least ten Web sites that might be useful for this type of game. Select the one you think is best for your purposes.

This Anticipation Game was devised for a fifth-grade class that was studying the solar system. It was one of the last assignments to be accomplished during the three-week unit. It is an activity that two students work on together. It does not need an evaluation rubric as the correct answers are evident. The kids seem to like this type of activity. I like it too, as it reinforces what has been studied in the class while offering new pieces of information in a painless way. If you are sneaky, you can create questions that involve higher-order thinking skills as well as creativity to answer. This adds to the challenge.

This Anticipation Game has two parts: First, the players have to locate a usable Web site, and second, they have to anticipate the answer to the question before checking out their answer on the Web site. By the way, you can find the answers to this Anticipation Game at *The Nine Planets* home page on **http://seds.lpl.arizona.edu/billa/tnp/**.

If you want the answers without resorting to the Web, here they are 1) Pluto; 2) Earth; 3) Aphelion [point where the object is farthest from the Sun]; 4) Saturn, Jupiter, Neptune and Uranus have rings; 5) It's the largest mountain in our solar system; 6) Jupiter; 7) Earth; 8) False—asteroids are small rocky bodies and comets are small icy bodies; 9) They both have an orbit, they both

revolve around the sun, and they are both named after characters in Roman Mythology, and 10) Jovian, Terrestrial and Pluto.

The first time, you play the Anticipation Game, model the game for your students. As your students become more adept at the game, make the questions more demanding. In addition, teams of students can make up Anticipation Games on other Web sites and topics of study, for other folks in the class to play. That way, they learn both when they are inventing the game and when they play it. Here are some other great Web sites that lend themselves well to the Anticipation Game:

Castles on the Web
http://fox.nstn.ca/~tmonk/castle/castle.html

Dinosauria OnLine
http://www.dinosauria.com/

The Maya Astronomy Page
http://www.astro.uva.nl/michielb/maya/astro.html

The Sun Page
http://www.hao.ucar.edu/public/education/education.html#additional.haoh_edu

A simpler, easier computer-aided game that you can play with your students using the Internet is a kind of Scavenger Hunt. Download a short story or poem from an appropriate site on the Internet (or require the game-player to download the file), put it in a file with a number of questions about the text, and require that the game-player find each item in the scavenger hunt. For Web sites with good stories and poems, check out some of the sites in Chapter 2.

I've always loved the imagery in "Jabberwocky," by Lewis Carroll. The *Jabberwocky Variations Web site* at **http://www.pobox.com/~kelthilm/jabberwocky/** has many translations and parodies as well as the poem itself. Here is a scavenger hunt that I devised for "Jabberwocky":

i. Read "Jabberwocky," by Lewis Carroll, at **http://www.pobox.com/~kelthilm/jabberwocky/**

ii. Respond to the following items based on "Jabberwocky."
   - Draw a Jabberwock.
   - Create a new action word for the Jabberwock to do. Define the word and draw a picture of the Jabberwock doing it.
   - Describe slivvy? Why would you want a slivvy? Argue your case.
   - Pick out another word in the poem. Define it. Why would you not want one? Argue your case.
   - Why should you beware the bandersnatch? What will happen if you are not cautious of one?

Games—let them have their place in your online classroom! They serve more purposes than just diversion, comic relief, relaxation or reward. Games teach us to be logical and precise and strategic in our thinking. Games can serve to reinforce skills and knowledge that you have been teaching. Maybe that's the best part—the kids learn, have fun while they're doing it, and don't even notice that they are learning. That's winning the best game of all, the Teacher Game!

Anticipation Game: The Solar System

Names: _____ Date: _____

Part I:

Find a Web site with many links about the Solar System to help you answer the questions.

http:// _____

Title: _____

Part II

Write your best guess, then check the Web site to see if it is correct.

My Anticipated Answer	The Question	Correct Answer & URL
	What is the smallest planet in our Solar System?	
	Which has the larger diameter: Earth or Mars?	
	What is the opposite of *perihelion*?	
	Name at least two planets with rings.	
	Why is the *Olympus Mons* an important feature on Mars?	
	What planet is the fourth brightest object in the sky?	
	Many planets are named for Greek or Roman gods or heroes. Which ones are not?	
	True or false: Comets and Asteroids are the same. Why or why not?	
	Name three things that Venus and Neptune have in common.	
	Describe the three types of planets found in our Solar System.	

Chapter 16:

Just for the Little Kids

A colleague of mine has a seven-year-old and a 23-month-old. The seven-year-old is already a computer whiz: He plays games, does his own Internet searches for more games, is knowledgeable about both hardware and software, and has even started doing homework on the family computer. His little brother had mostly been watching.

One hot day, when mother and sons came home from a grocery-shopping expedition, the 23-month-old imperiously commanded: "'Puter, Mommy! 'Puter!" "In a minute, honey!" my friend replied, wiping the melting ice cream off her elbow.

Impatient, the younger sibling scrambled up the stairs to the computer room, and in a few seconds, my friend heard the "Ding!" that told her that someone had turned on the computer. "He can't hurt it or himself," she thought, and finished putting the groceries away, and then forgot all about it. Thirty minutes later, she remembered—stillness in a house full of kids is a loud warning. Up the stairs she went.

The less-than-two-year-old had turned on the switch at the surge blocker, negotiated the main menu, found the game he wanted, and was now blissfully wrapped up in 'puter play.

What 3- to 8-year-olds can do with the Internet

How young can they learn? It's a question of motor control, not of mind—the mind is ready to learn at birth (and, some would say, before birth). For you, the point is this: Your kids are probably already inherently better at computers than you are because they are younger, naturally meddlesome, full of curiosity, and many of them grew up in a world where these machines are as familiar as TVs, whereas you did not. More importantly, their minds are like a whole roll of expensive paper towels: They can soak up almost as much as you can pour on them. Have no hesitation about presenting sophisticated Internet instruction to even your youngest students. What they can't execute on their own, they can watch and learn from, and they can understand just about anything you tell them, if you use words that they know or can guess.

Please don't misunderstand me. I love books (*b*asic *o*rganizers of *o*ffline *k*nowledge) and the enjoyment they bring, but I also know that if my students are going to be ready for the 21st century, they have to know how to work with online computers. To that end, start them as early as possible, assuming you feel comfortable with the idea.

The Internet is full of ideas and possibilities for 3-4-5-6-7- to 8-year-olds, not to mention 23-month-olds: stories, games, pictures, and just the sheer fascination of watching the world blip and bleep on a screen before their eyes. Just as Sesame Street gave a whole generation a head start with reading readiness, the kids raised with computer games are going to be ahead in terms of a variety of skills: small motor control in their fingers, hierarchical logic (finding their way with menus and through Web sites), spelling (one has to be precise when keying in URLs), and keyboard writing readiness (it's easier to type, once you know how, than it is to wield a pen or pencil). There are traditional skills that can benefit from use of the Internet too. These include left-to-right reading orientation, letter and picture recognition skills, vocabulary development, and reading and writing skills.

Little people can walk the Internet, drive the search engines, download the files, and play the games just like big people, though they may need a bit more help. You probably will not have all your little people working with the Internet on a daily basis, but my guess is that you will find them eager to log on. As the story of my friend and her not-quite-two-year-old indicates, kids and computers are natural allies. If you have an online computer in your classroom, there's no reason for it not to be in use by someone all the time. Getting some of them to leave it alone will be a bigger problem than getting most of them interested in it! So, even in kindergarten and the primary grades, make the Internet an integral part of your curriculum; it can teach so much and with so little effort or stress.

One problem you will confront is the age-old problem of the haves and the have-nots. Some young kids have computers at home, and they will come to your class already computer literate and ready to log on. Others not only will not have computers at home, but also they will have never even touched a computer keyboard. In our time, the computer have-nots are seriously at risk in the scramble for knowledge, and it is your job as a teacher in a democracy to help make computer equality a new amendment to the Constitution.

Computers belong in the primary grades

Right now, I'm seeing kindergartners coming to school who already know how to operate a computer. They can turn it on and off, identify letters on the keyboard, and use rudimentary hunt-and-peck typing skills to access and work on the programs that they know. Your students who have this much skill can also access the Internet. Your other students will need your help to catch up, but if you give it to them, they will catch up fast.

The computer in and of itself is an excellent resource for teaching left-to-right reading orientation (a desperately needed corrective against the evil effects of watching too much television), symbol-to-letter recognition, sound-to-symbol recognition, and word-to-

symbol recognition. On the other hand, not all grown-ups like computers, and neither—you may be sure—do all kids. Children whose "frame of mind" is dominantly bodily-kinesthetic (as Howard Gardner might put it) may have trouble sitting still for computer time. Let's not make the mistake that has been made so often in the past: This new technology, though it may be the best thing since sliced bread to you or me, is not as appealing to some children as it is to others, and it will not work equally well for all. (Not everyone likes sliced bread, either.)

Internet work is trickier with little ones, but not impossible. Peer collaboration is one excellent way to go: Work with a teacher in an upper grade, and set up a couple of times in the week for your little folks to partner with the older kids. To make maximum use of the available computers, some of your kids could go to the other room, and some of the other kids could come to your room. With this computer-buddy system—one little kid and one big kid (or two and two around a single computer, taking turns)—your students can walk the Web, see exciting Web sites, read files, compose e-mail, download programs, games and files, carry on a keypal correspondence with someone overseas (or across town), and compose their own literary masterpieces.

See Chapter 7, "E-pals and Keypals," for addresses of mailing lists that specialize in electronic penpals, even for the little folks. You can view *Kid's Com* at **http://www.kidscom.com/** where your students can sign up for penpals. By the way, like most sites in this chapter, it is "Kid Safe." If you are curious, click on the parent's and teacher's button, **http://www.kidscom.com/orakc/adults/** to find out what this Web site is doing. Also check out the MECC (Minnesota Educational Computing Corporation) *Good Sites for Kids* at **http://www.mecc.com/kids/kid.links.html**. These are the people who developed the "Oregon Trail" game.

When you involve your students in an e-mail activity, they will begin to communicate with one another on a plane quite different from the ordinary. E-mail gives adults instant intimacy and an ability to work together without knowing one another well. I do not know what goes on in the minds of little kids as they face a screen with a message on it from their peers, but an equally powerful mental alchemy is at work, and it is good. At the least,

the e-mail experience seems to help little people negotiate their way out of their ego-centered stage in kindergarten and first grade and start thinking about, and with, others.

Take a look at the e-mail books a group of second graders are publishing at *Hoffer Elementary School* and *Murphy Ranch School*. Both are accessible at **http://cmp1.ucr.edu/exhibitions/hoffer/home/hoffer.e-mail.html**.

In situations where the younger student knows what to say but has insufficient skills to write it down, the older student can do the writing or typing. Taking dictation from the younger buddy is good writing practice for the older buddy, and, then, reading the printout will prove to be an altogether inspiring "language-experience" for the not-yet-quite-literate author.

This approach is good for both sets of kids for more reasons than just teaching them computer skills. The bigger kids learn about patience, along with listening, asking, clarifying, helping, and giving feedback, not to mention typing, spelling, grammar, and reading skills. (Reassure the older peer tutors that they can ask you for help, if they get stuck.) The littler kids learn how to compose their thoughts and dictate them in a logical manner, how to answer questions intelligently, how to correct an older person thoughtfully, and how rationally to get what they want. Both kinds of kids learn how to get along with one another.

After your students have worked with e-mail and are comfortable with their cyber-buddies, they can venture out onto the Internet together. At first, I thought FTP was too difficult for 6-year-olds. That notion lasted until I saw home pages that had been made by young children! These kids have set up home pages incorporating their own stuff and documents from all over the Internet.

PeanutNet

There are many home pages on the Web authored by kids and/or their parents. (It's difficult to tell who is doing the coding.) Since Web resources are read-point-and-click interfaces, they are not technologically difficult for youngsters to access. Recent Web browsers have graphics and sound capabilities that make them ideal for younger kids. Computers equipped with audio software

and sound and video cards make the Web just that much more appealing to kids. Many of the Web pages created by kids have sound and QuickTime movies, and all of them have links to other Web sites. Here are a couple of the many home pages created by or for little people.

Spooky Snake Net: David's Home Page

http://www.charm.net/~jcain/david.html

The author was five years old when the page was made. This home schooler loves snakes, speaks a bit of Norwegian and maintains his Web site too.

Emma Bowen's Home Page

http://www.comlab.ox.ac.uk/oucl/users/jonathan.bowen/children/emma.html

Emma regularly updates her Web site, and I've been reading it for three years. I've seen Emma grow up. She lives in Oxford, England, with her mother, father and sister. See her stories and pictures. It's quite entertaining.

Kids Did This

http://sln.fi.edu/tfi/hotlists/kids.html

This hot link collection of kid-generated stuff starts out with this warning: "It's a challenge to keep up with kids on the Internet, but we're trying. Our hotlist of student-produced stuff became too long for one page! Explore the topics that interest you. One word of caution: Some student-designed pages take extra time to load. Caveat surfer."

The International Kids Space

http://www.kids-space.org/

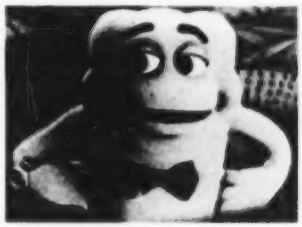
You can read stories written by kids, view their paintings, ask a doctor for advice, or switch languages from English to Japanese. The youthful authors proclaim their "page is rated G," and it is.

Internet for little guys

The Web is icon-oriented, which makes pointing and clicking easy for beginners. If you have some bookmarks to sites of high interest already loaded, that will make the process easier still. Many Web sites are quite graphical, with pictures and brief explanations that are relatively self-explanatory.

Timmy the Tooth

http://www.mca.com/home/playroom/cgi-bin/story/timmy



This is another interactive story. To personalize the story, your child can write his or her name in a box.

Theodore Tugboat

http://www.cochran.com/theodore/ and
http://www.pbs.org/tugboat/

If you have seen the popular children's TV program, Theodore Tugboat, then you know what to expect. At this Web site you can enjoy the interactive storybook with pictures, the coloring book, and the hot links to other places kids like to go on the Internet. You can view the mirror site from PBS online.

Carlos' Coloring Book

http://www.ravenna.com/coloring/

This is one of the first coloring books on the Web. I've tried to use it, but it never works for me. I've seen kids use it, and it works every time. I guess you just have to be a kid!

Alex's Scribbles—Koala Trouble

http://www.gil.com.au/max/

The idea for the story *Koala Trouble* is by Alex, a five year old, but the Web page is done by his dad. This is a clever story.

Children's Stories on the Web

Some Web sites are written for children. There are many Web sites that feature children's literature, and I've only listed a few. Luckily, each of these Web sites has links to other sources of online children's literature.

Children's Story Books Online

http://www.magickeys.com/books/

Possibly the best of the story sites on the Web.

The IPL Story Hour

http://ipl.sils.umich.edu/youth/StoryHour/

Part of the Internet Public Library Web site, it has links to several stories you can read aloud to your kids. You might want to check out the *Main Index for the Youth IPL* at **http://ipl.sils.umich.edu/youth/index.html** while you are in the vicinity.

Internet Favorites of Kids

Since even before *Jurassic Park* and Barney, dinosaurs have long been a favorite of most primary-age students. On several lists of "kids' favorites" and "what's cool for kids," are Dinosaur Web sites.

The Dinosaur Tour at the Field Museum

http://www.fmnh.org./exhibits/dino/Triassic.htm

It is informative and interesting, with text and graphics. Check it out and judge for yourself whether it's right for your kids. If you decide to teach your primary students using the Dinosaur Homepage, I'd be curious to know how it went. Send me some e-mail to **cotton@Instruction.com**.

The Froggy Page

http://frog.simplenet.com/froggy/

Besides big things like dinosaurs, little kids also like small, wiggly things. This Web site is just right for kids who love frogs. It has links to scads of frog-type documents, graphics, fun things to do, and even coloring pages. If you want to delight your six- to eight-year-old herpetologists, click and point them to The Froggy Page.

Explore the Internet with Dr. I

http://ipl.sils.umich.edu/youth/DrInternet/

A great site for science-minded kids who want to know more about science and math, as well as the Internet. Dr. I is part of the Internet Public Library.

The International Museum of the Horse

http://www.imh.org/

I would be remiss if I did not mention this Web site. It has links to information about horses, and young horse lovers think it's great!

A site for kids and parents to share together

Parents and Children Together Online features read-along stories and articles for parents (or teachers) and kids, ages 4–10 to share, along with book reviews and recent children's literature. The free online magazine can be found at the Web site of the ERIC Clearinghouse on Reading, English, and Communication (ERIC/REC): **http://www.indiana.edu/~eric_rec/fl/ras.html.**

Quick and easy ways to get your kids published on the Web

Because the archival capacity of virtual space on the Internet is practically infinite, and amazingly inexpensive, for the most part, all the old constraints and cautions of the hard-copy publishing world are now outmoded. Now, everyone who wants to can get published electronically, and if you can't find a place that looks just right to place your electronic publications, you can set up your own electronic publishing company by merely saying you have done so on your own home page. Your class can set up its own home page (see Chapter 5, "Developing and Designing Web Pages") and publish whatever you and your students want. If your class goes into the publishing business, you will want do so with the support of your school. Schools are accountable for the electronic publications of their students, just as they are for other kinds of school publications, so I advise you to talk to the person

at your school who knows about such journalistic guidelines. At the Web site below, your kids are welcome to publish their own stories, and they can read stories published by other kids.

KidsPub: Submitting your Story

http://www.kidpub.org/kidpub/howto.html

You and your students can see what other kids are doing in school. Encouraging and empowering, KidsPub is proof that little people can and do write good stories and get them published.

Home Schoolers on the Web

The Internet is also useful for home schoolers. There are many Web sites for home schoolers, take a look at just a few of them. Each has links to other home school Web sites, so you should not have any trouble finding things for your kids to do on the Internet. By the way, there are some good links for children on these pages, too.

The Teel Home Education Page

http://www.teelfamily.com/education/

Part of a larger site by the Teel Family of Alaska (**http://www.teelfamily.com/**). This page is updated regularly, as the Teel Family is home schooling their children and using the Internet as a means of giving and receiving information.

Idaho Home School on the Web

http://netnow.micron.net/~ihs/

Resources and information on how to home school your child. Also, you'll find some good curriculum and educational resources.

Other sites besides these are available for young kids, but we could use many more such sites. This is a ripe opportunity for you and your class to take on the project of developing your own Web site, going into the electronic publishing business, and linking up with anything that interests your 4- to 8-year-old students. Cyber-buddies, older with younger, can collaborate to design, code, test, and upload a school home page with individual home pages for each of the grades or for multiple rooms. See Chapter 5 for how to get started on your own home page.

So much is possible using the Internet to teach and learn. Here's a couple more ideas:

- Read and discuss (on e-mail) electronic books, linking your class with one down the hall, across town, or on the other side of the globe.

- Go to *The Froggy Page* and develop a lesson by hotlinking to frog fables and frog stories on other pages, all of which can be integrated by linking to yet another page about frog habitat, all of which can be given a scientific bent by linking to the Virtual Frog Dissection Kit. With this kind of electronic leapfrogging, you could hotlink an excellent Frog Unit together!

As with every other chapter in this book, I appreciate your feedback and suggestions. Have you found any other good Web sites for computer whizzes in the twenty-three-month-old to the eight-year-old range? I'd love to hear from you. Please write me at **cotton@instruction.com**. Thank you!

I hope you have enjoyed reading this book. I wish you many happy hours of Web walking with *The Online Classroom: Teaching with the Internet*.

Selected Internet Books

Ackermann, Ernest C. (1995). *Learning to Use the Internet: An Introduction With Examples and Exercises*. Wilsonville, OR: Franklin Beedle & Associates. ($17.00)

Ahmad, Nyla, Martha Newbigging, and Keltie Thomas (1996). *Cybersurfer: The Owl Internet Guide for Kids*./Book and Disk. Toronto: Owl Communications. ($19.95)

Armstrong, Sara (1995). *Telecommunications in the Classroom*, second edition. Palo Alto, CA: Computer Learning Foundation.

Benson, Allen C. , and Linda Fodemski (1996). *Connecting Kids and the Internet: A Handbook for Librarians, Teachers and Parents* (Neal-Schuman Net-Guide Series). NY: Neal Schuman Publications. ($35.00)

Bix, Cynthia (1996). *Kids do the Web*. Press Staff Adobe. ($25.00)

Biggar, Bill, and Joe Myers (1996). *Danger Zones: What Parents Should Know About the Internet*. Kansas City, KS: Andrews & McMeel ($10.95)

Burke, John (1996). *Learning the Internet: A Workbook for Beginners* (Neal Schuman Net-Guide Series). NY: Neal Schuman Publications. ($29.95)

Castro, Elizabeth (1996). *HTML: For the World Wide Web* (Visual Quickstart Guide). Berkeley, CA: Peachpit Press. ($17.95)

Clark, Carol Lea (1996). *A Student's Guide to the Internet*. Upper Saddle River, NJ: Prentice Hall. ($17.40)

Classroom Companion Netbook Series. (1995). Lancaster, PA: Wentworth Worldwide Media, Inc.

Volume 1: *Internet Basics for Educators: The Step by Step Guide to Using the Internet*. ($12.95, ISBN 0-932577-17-1)

Volume 2: *Educator's Guide to Searching the Internet: How to Locate Educational Treasures on the Internet*. ($12.95, ISBN 0-932577-18-0)

Volume 3: *Educator's Guide to Using Email: Global Communications for Classroom Success*. ($12.95, ISBN 0-932577-19-9)

Volume 4: *Educator's Guide to Internet Classroom Projects: Creating and Participating in Online Projects*. ($12.95, ISBN 0-932577-20-2)

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Abridged Glossary of Internet Terms

Acceptable Use Policy (AUP)

A policy addressed to Internet users aimed at insuring appropriate behavior in Cyberspace and limiting the type of material that can be accessed from the Internet. Enforcement of AUPs varies with the Internet Service Provider. See Chapter 3.

Archie (short for Archives)

The searching tool for finding files or archives at FTP sites. See Chapter 6.

Bookmarks

A function on Netscape which allows you to keep a list of interesting sites so they may be easily found again. On Internet Explorer this function is called "Favorites."

Browser

An Internet navigation program that interprets and displays hypertext documents. Netscape Navigator, Internet Explorer and NCSA Mosaic are examples of browsers. See Chapter 1.

Cache

A location in computer hard-disk memory where data is stored for easy retrieval.

CU-SeeMe

Pronounced "See you, See me," it is a publicly available video-conferencing program developed at Cornell University. If you have audio/video capabilities and an Internet connection, you can videoconference with someone else with the same capabilities. It also allows many people to videoconference at the same time. See Chapter 6.

Cyberspace

Term originated by author William Gibson in his novel *Neuromancer*. Cyberspace, the Internet, and the Information Superhighway are considered synonyms.

Domain Name System (DNS)

The Internet naming scheme, which consists of a hierarchical sequence of names from the most specific to the most general (left to right), separated by dots; for example, www.csuchico.edu.

Download

To transfer files from a computer out there on the Internet to your computer.

E-mail (Electronic Mail)

Messages, usually text, sent from one person to another via computer. See Chapter 7.

Error Messages

Error messages may result from a variety of situations, some relating to the operation of the Web browser, others to the operation of the Internet network. The Web browser tries to evaluate any problem that is encountered and present you with information to help you solve or get around the problem.

The most common error messages result from trying to bring up a page that is not currently available. The server issuing the page may be temporarily shut down, or too busy with other connections to handle your request. You could try the site again at a later time. However, the page may no longer exist, or it may have a new address due to the constantly changing nature of the Internet.

FAQ (Frequently Asked Questions)

Documents that list and answer the most commonly asked questions on a particular subject. FAQs are usually written by people who have become tired of answering the same question over and over. If you want to find out more about a Web site, mailing list or newsgroups, read the FAQ.

Flame

A negative response to an e-mail message or newsgroup posting.

FTP (File Transfer Protocol)

A very common method of transferring files between two networked computers. There are many Internet sites that have publicly accessible material that can be obtained using FTP, by logging in using the account name "anonymous," thus these sites are called anonymous FTP servers. FTP is also used to upload files to Web servers. Macintosh users can use an FTP program called Fetch for these purposes. See Chapter 6.

Gopher

A second generation navigation program that uses menus to display material. Although use of Gopher spread rapidly in only a couple of years, it is being replaced by Web browsers such as Netscape and Internet Explorer which are easier to use. There are still many Gopher Servers on the Internet and we can expect they will remain for a while. See Chapter 6.

Home Page

This is the introductory or index page for a Web site that has hypertext links which when clicked on, will take you to secondary Web pages. See Chapters 1 and 5.

HTML (HyperText Markup Language)

The formatting codes used to create Web pages that can be read by Web browsers. HTML looks a lot like old-fashioned typesetting code. See Chapter 5.

Hyperlink (or Link)

A word, phrase or image in a Web page or other hypertext document which, when clicked upon, links you to another document, which may or may not also be a hypertext document. These links are generally, but not always designated by blue underlined test (or a blue line surrounding an image).

Hypermedia

The combination of hypertext and multimedia in an online document. See Chapter 6.

Internet (Upper case I)

The huge collection of inter-connected networks that all use the same protocols and that grew from the ARPANET of the late 60's and early 70's. The Internet now connects millions of independent networks into a vast global network.

Internet (Lower case I)

Any time you connect two or more networks together, you have an internet - as in inter-national or inter-state network.

IRC (Internet Relay Chat)

Similar to a conference call only using the Internet instead of a telephone. Basically a huge multi-user live chat facility. There are a number of major IRC servers around the world which are linked to each other. See Chapter 6.

ISP (Internet Service Provider)

A company that provides Internet connectivity and services to individuals, businesses and organizations.

Java

A programming language invented by Sun Microsystems that is specifically designed for writing programs that can be downloaded to an internet-connected computer regardless of platform (Mac, PC, UNIX, etc.) and immediately run. Using small Java applications (called "Applets"), Web pages can include functions such as animations, calculators, and other fancy tricks. See Chapter 6.

Listserv or Mailing List

An e-mail forwarding program which allows many users to communicate on a chosen subject. The mailing list provider has a central address by which messages can be sent and then distributed to all subscribers to the list. See Chapter 7.

Login

Noun: Your user name needed to gain access to a computer system. Not a secret name like your password.

Verb: The act of entering into a computer system, e.g. Login to CARL.

Lurking

A person who is just listening to the discussion (either in a mailing list or newsgroup) without saying anything. If you are new to the forum, lurk until you get up to speed.

Mirror Site

Due to the popularity of some Internet sites, mirror sites came into existence. They are an exact replica of another Internet site. If you have trouble getting connected to one site, for example, because of the high amount of traffic, you can usually connect to a mirror site that contains the same information on a different computer, oftentimes located geographically closer to you than the original site.

Modem (MOdulator, DEModulator)

A device that you connect to your computer and to a phone line, which allows the computer to talk to other computers through the phone system. Basically, modems do for computers what a telephone does for humans.

Netiquette

The etiquette on the Internet. The "rules" of etiquette used on the Internet.

Password

Your private code needed to gain access to a secure system.

Search Engine and Directories

Two tools which allow you to search for information on the Web. There are a number of increasingly specialized search engines and directories available for a variety of purposes. See Chapter 4.

Shareware

Computer software programs you can readily download, for which the author expects to receive some compensation for continued use.

Telnet

When establishing a Telnet connection to another computer, your computer basically becomes a terminal for their computer, functioning somewhat like an ATM terminal. See Chapter 6.

Upload

To transfer computer files from your computer to another computer. On e-mail, this is called "including an attachment."

URL (Uniform Resource Locator)

Sometimes pronounced "earl," this is the standard way to give the address of any resource on the Web. A URL looks like this: **http://www.xyz.edu**. See Chapter 1.

***Veronica* (Very Easy Rodent-Oriented Net-wide Index to Computerized Archives)**

The way to search for information in GopherSpace. Veronica is a constantly updated database of the names of almost every menu item on thousands of gopher servers. See Chapter 6.

*Definitions on this list were gathered from the following sources on the Internet:

- *Glossary of Internet Terms*
  http://www.vtls.com/glossary.html
- *Internet Guide from Pacific Lutheran College*
  http://www.plu.edu/www/libr/guides/glossary.html
- *KnightWeb's Internet Glossary?*
  http://www.knightweb.com/KnightWeb/glossary.html
- *McGraw-Hill Internet Training Manual—Internet Glossary*
  http://www.marketing-coach.com/mh-guide/glossary.htm
- *WebInfo: Internet Glossary*
  http://www.rpi.richmond.bc.ca/webinfo/glossary.html

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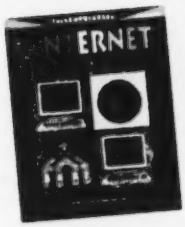

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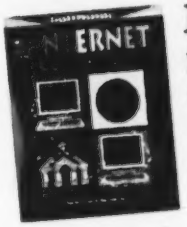

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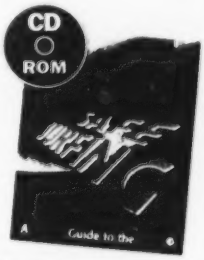

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